

HOW TO DRAW
MANGA
Sketching Manga-Style

Vol.4 All about Perspective

Purpose of This Book

Capture a Sense of Volume and Space to Create an Appealing Composition

The field of Painting gave birth to perspective techniques, but today they grew to fully matured, perfected sketching techniques in the fields of Architecture and Design as "drafting techniques." However, *manga* is not drafting.

While compositions often lack perspective or have wonky perspectives, an image with a clearly defined perspective is visually convincing. This book introduces perspective techniques suitable for use when actually creating *manga* or book illustrations and teaches as methods for learning how to use a sense of presence and volume to tell a story on the paper's surface.

Compositions that show an awareness of perspective refer to composing with an awareness of depth and space. Characters are three-dimensional objects. And, the setting or background is nothing more than a large, three-dimensional object called a "space," which contains the characters.

Use this book to learn the techniques in drawing characters and settings suited to normal perspective drawing and to creating appealing compositions that have depth.

HOW TO DRAW MANGA: Sketching Manga-Style Vol. 4 All about Perspective
by Hikaru Hayashi

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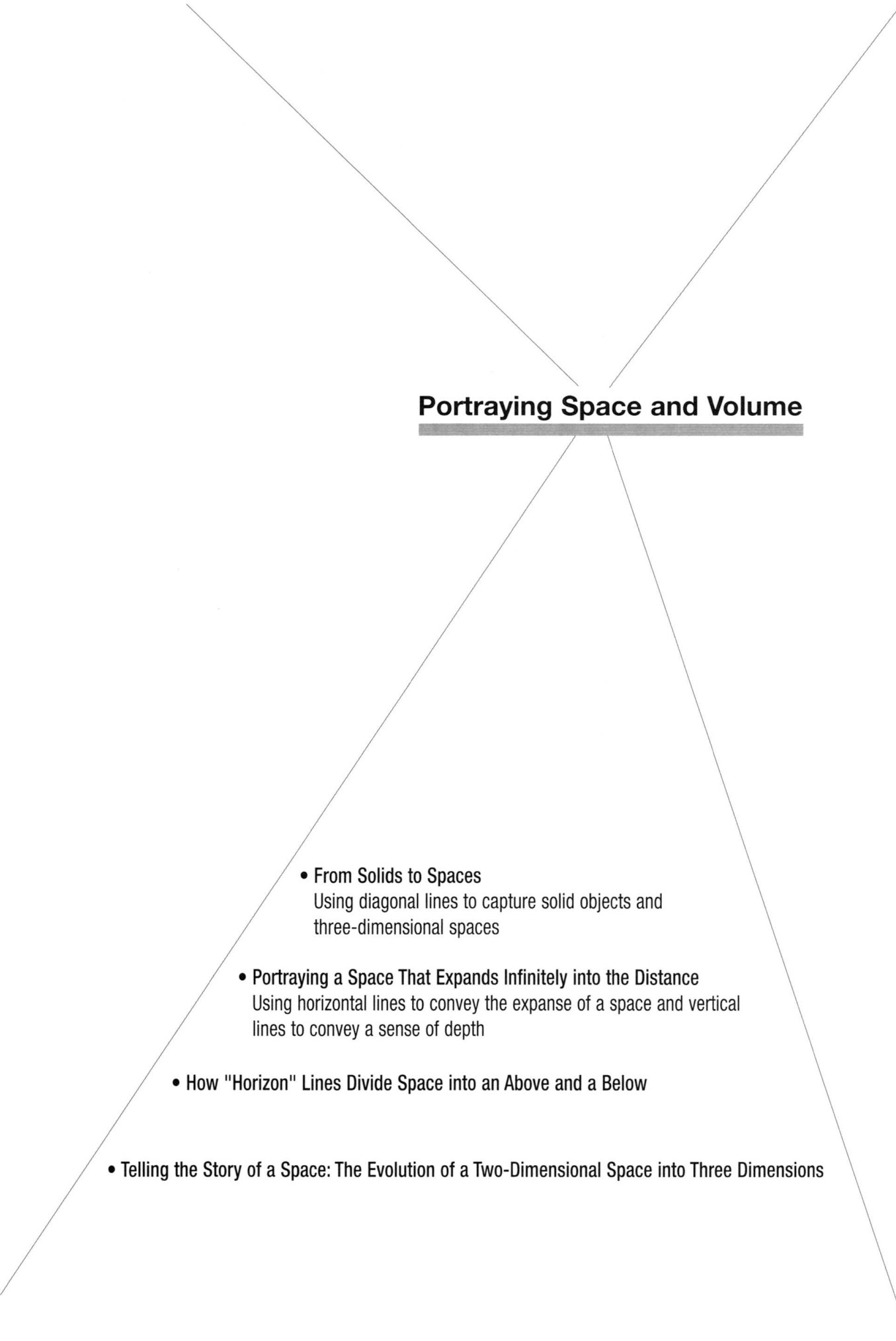
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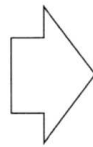
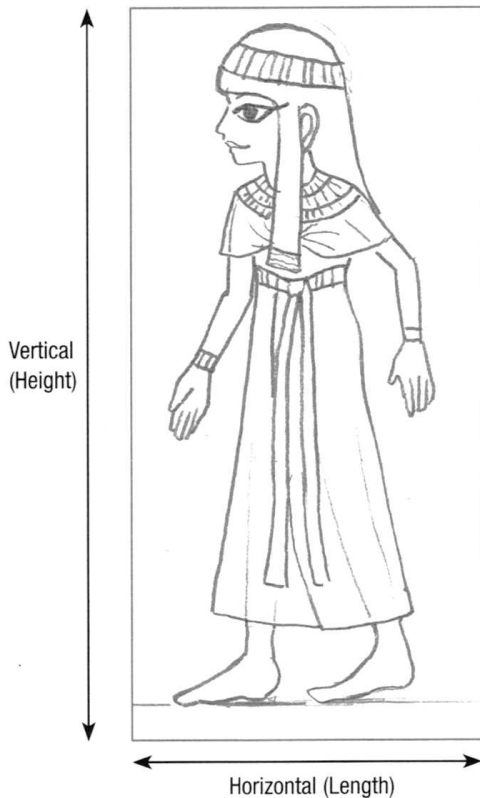
Portraying Space and Volume

- **From Solids to Spaces**
Using diagonal lines to capture solid objects and three-dimensional spaces
- **Portraying a Space That Expands Infinitely into the Distance**
Using horizontal lines to convey the expanse of a space and vertical lines to convey a sense of depth
- **How "Horizon" Lines Divide Space into an Above and a Below**
- **Telling the Story of a Space: The Evolution of a Two-Dimensional Space into Three Dimensions**

From Solids to Spaces

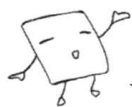
Diagonal lines create the illusion of a difference between two-dimensional and three-dimensional objects. Below shows how to maintain an awareness of perspective when making a character appear three-dimensional.

Egyptian Mural: Note the figure's refined, flat portrayal.



Adding diagonal lines to give the figure a sense of depth transforms the character.

Now the Egyptian mural has become a three-dimensional character.

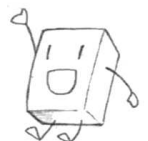


Two-dimensional objects are portrayed using only height and length. They lack a sense of volume.



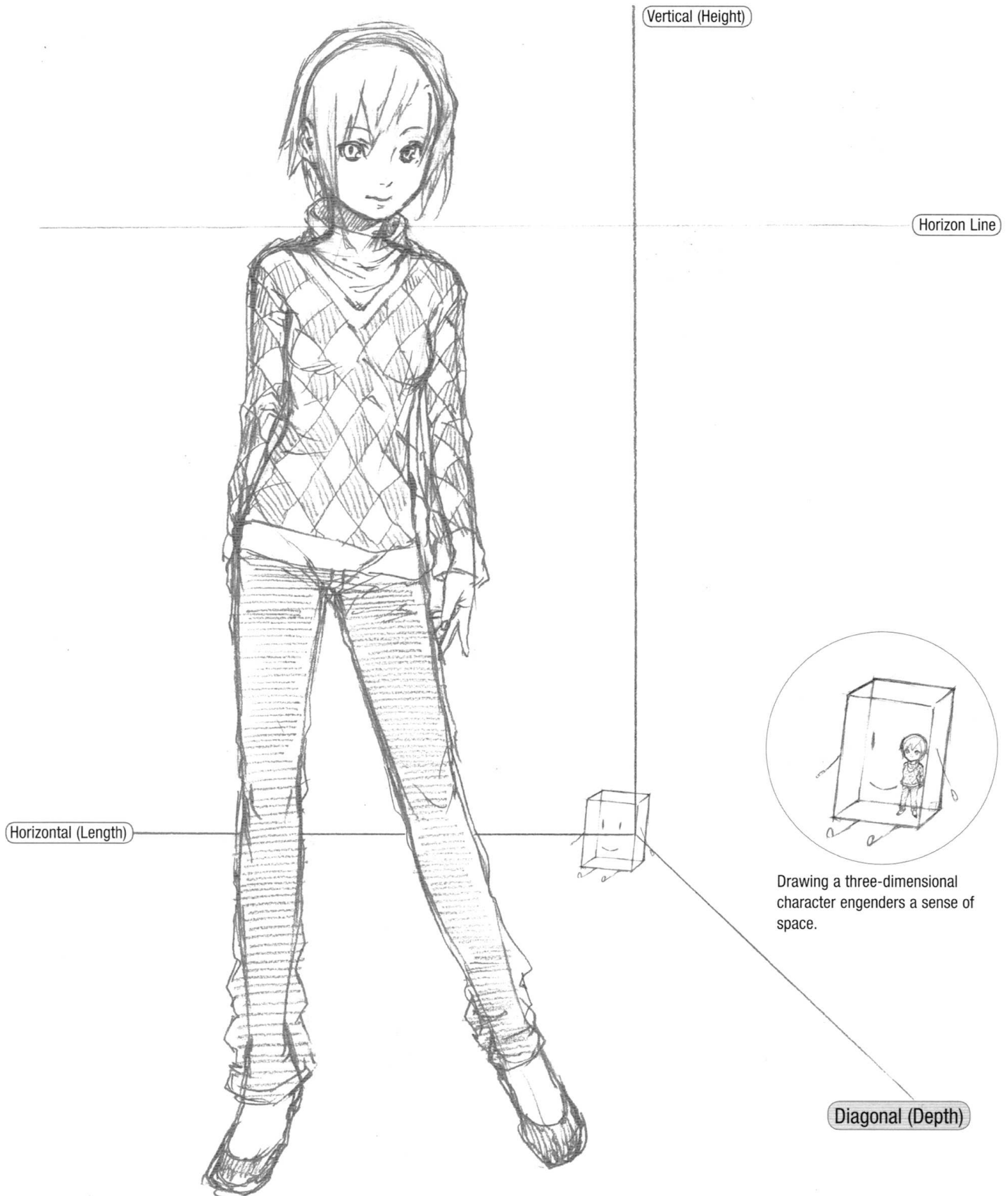
The Egyptian mural lacked a rear view.

Three-dimensional objects have vertical lines (height), horizontal lines (length), and diagonal lines (depth)!



Using Diagonal Lines to Capture Solid Objects and Three-Dimensional Spaces

Sketched lines are in reality clusters of lines evoking a sense of depth. Let's take a look at spaces through sketching characters.



Portraying a Space That Expands Infinitely into the Distance

Drawing a figure that gradually decreases in size creates the illusion of distance (depth).

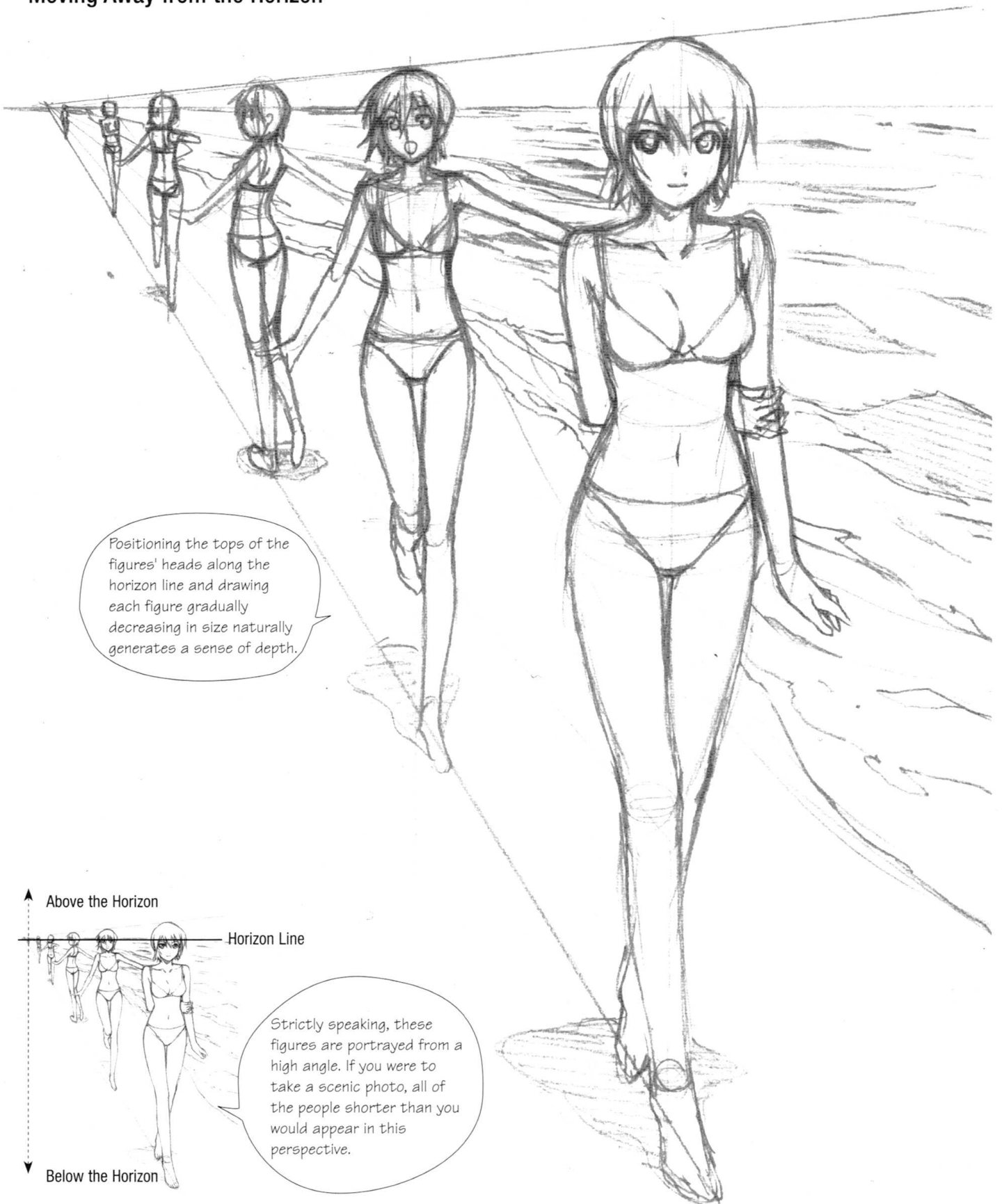
Moving toward the Horizon



Using Horizontal Lines to Convey the Expanse of a Space and Vertical Lines to Convey a Sense of Depth

The horizontal and the vertical portray a sense of space. Consequently, you need to include diagonal lines to connect them when drawing.

Moving Away from the Horizon

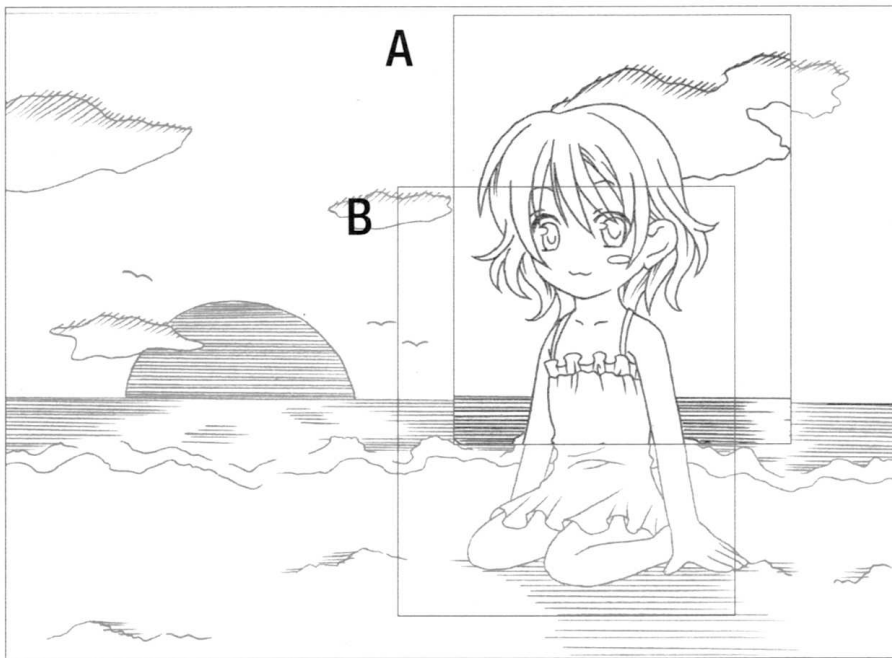


How "Horizon" Lines Divide Space into

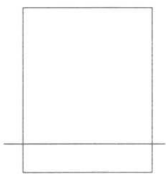
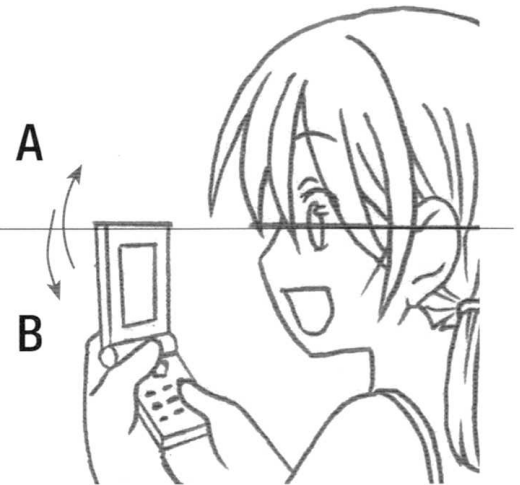
Experiencing a Horizon Line



Where the sea or the ground meets the sky is generally referred to as the "horizon (line)."

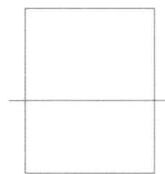


The horizon line corresponds to the photographer's (viewer's) eye level.



A

Generally speaking, the photographer or artist positions the horizon line similarly to that shown in A when intending to evoke a feeling of an expansive space.



B

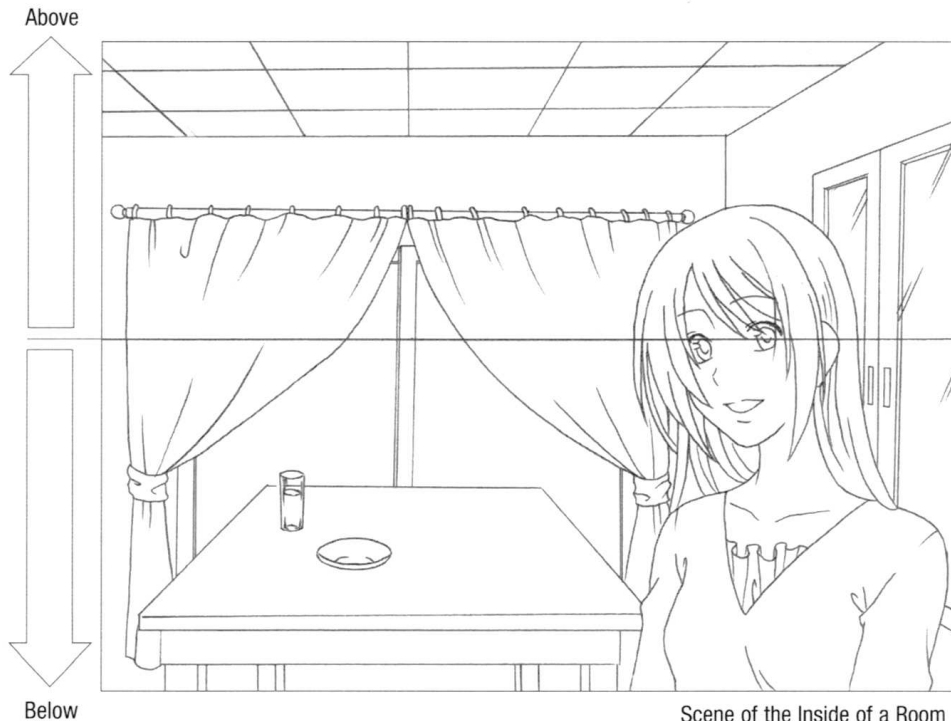
In general, the photographer or artists positions the horizon line similarly to that shown in B when intending to evoke a feeling of depth.



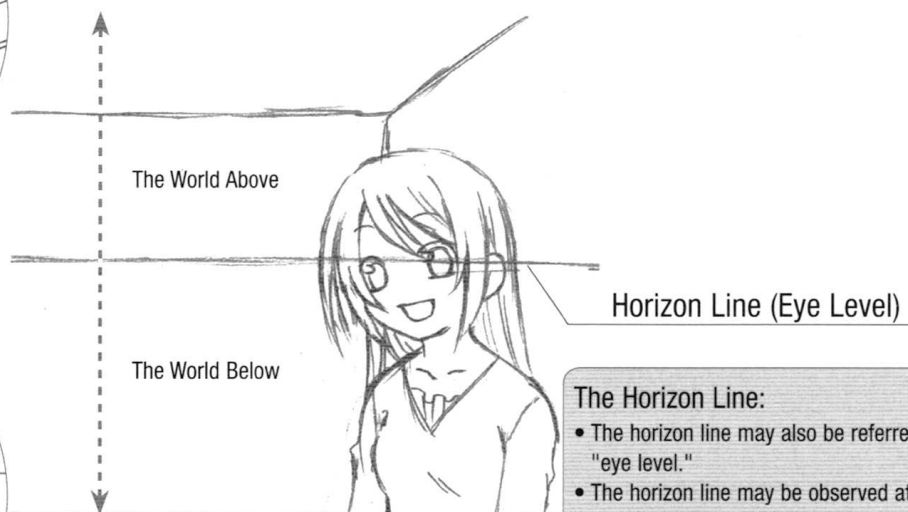
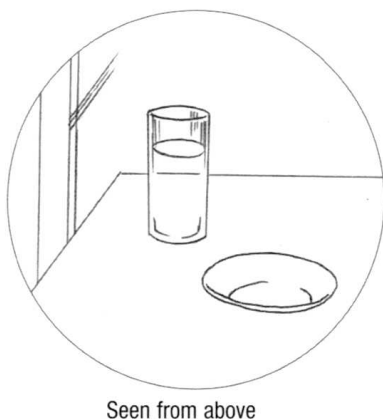
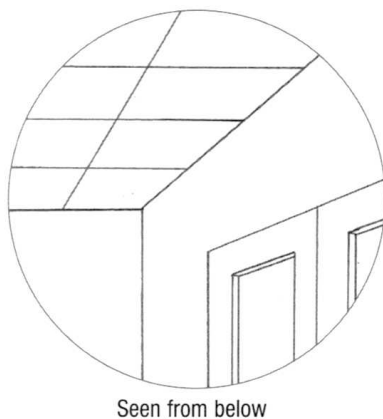
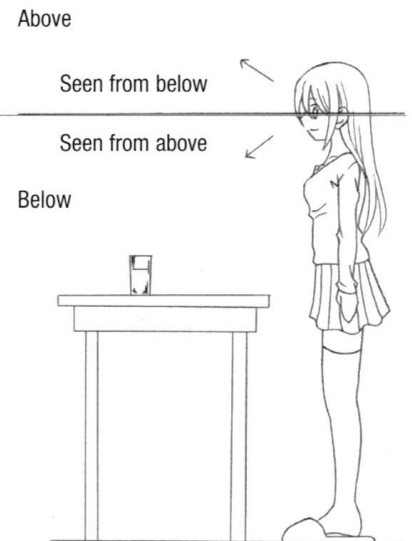
an Above and a Below

The horizon line divides the space into a world above and a world below.

Capturing the Worlds Above and Below



Most compositions comprise objects which the viewer sees from above or below.

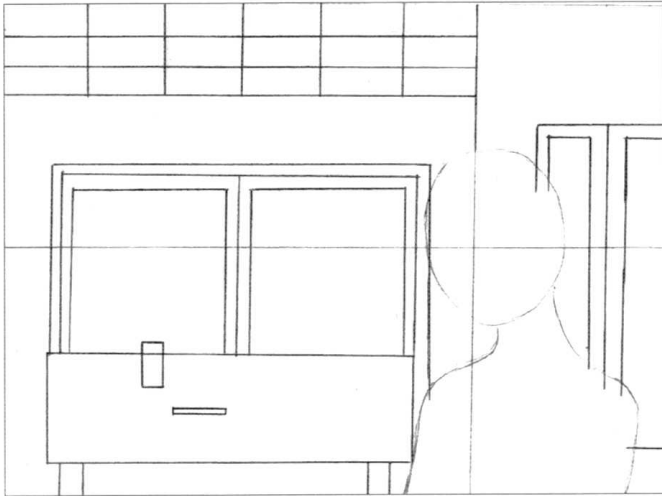


The Horizon Line:

- The horizon line may also be referred to as "eye level."
- The horizon line may be observed at the beach as the ocean's horizon.
- Think of the horizon line as an imaginary line to use when sketching or when photographing.
- The horizon line is meant as an aid when composing a sketch and as a general rule is drawn perfectly horizontal.

Adding Diagonal Lines to the Worlds Above and Below to Create a Sense of Depth

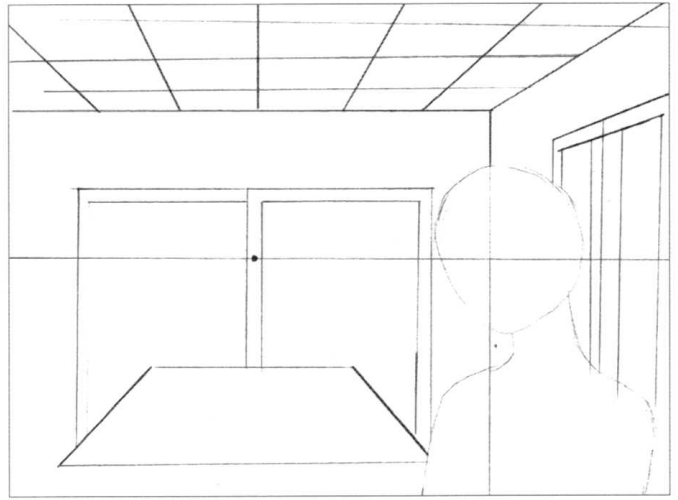
If a drawing of a room had no diagonal lines, it would look like this:



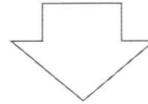
The composition looks flat and has no sense of depth.



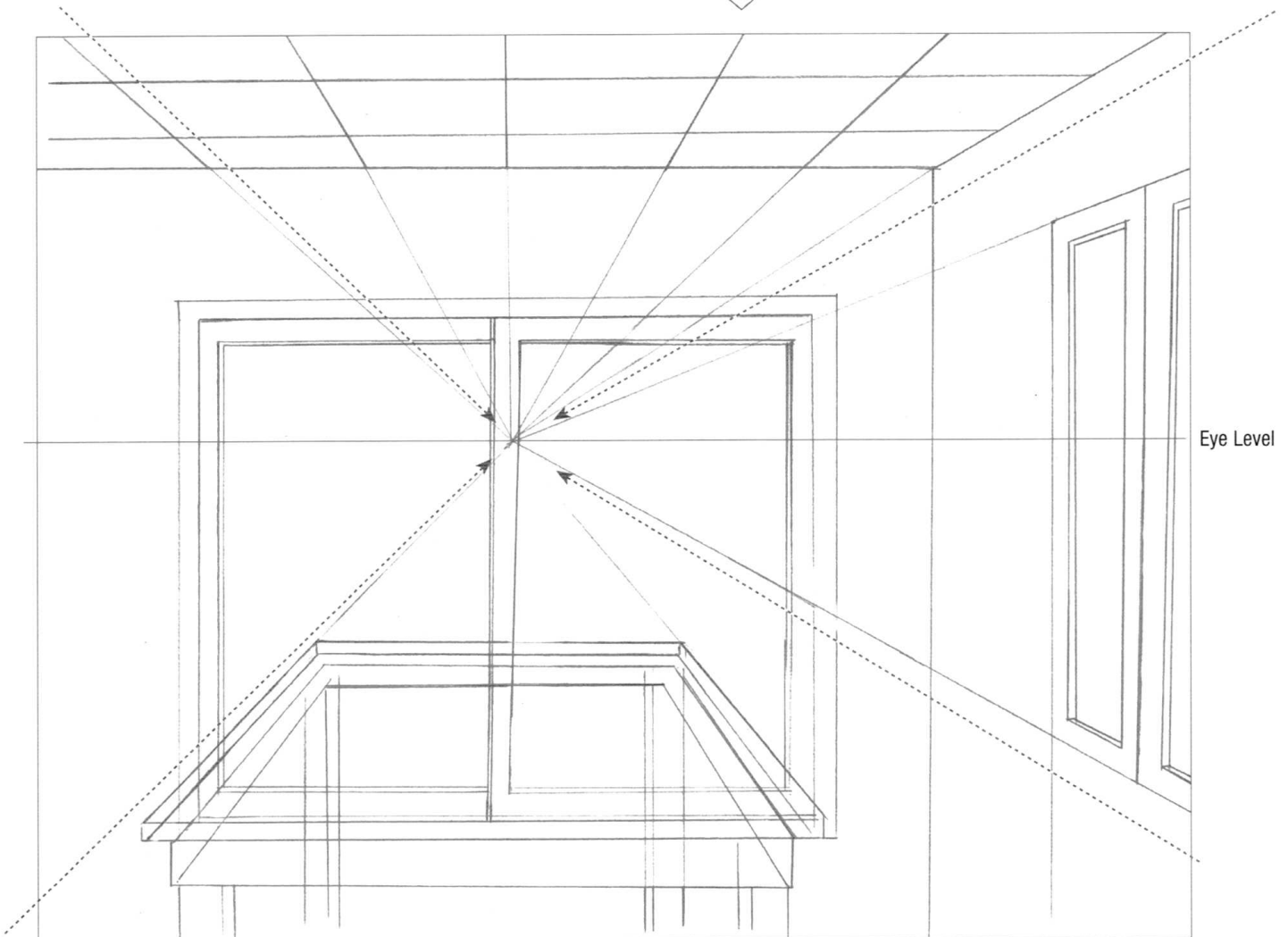
Here is the same room with emphasized diagonal lines:



This alone gives the composition a sense of depth.



Now let's extend the diagonal lines even further.

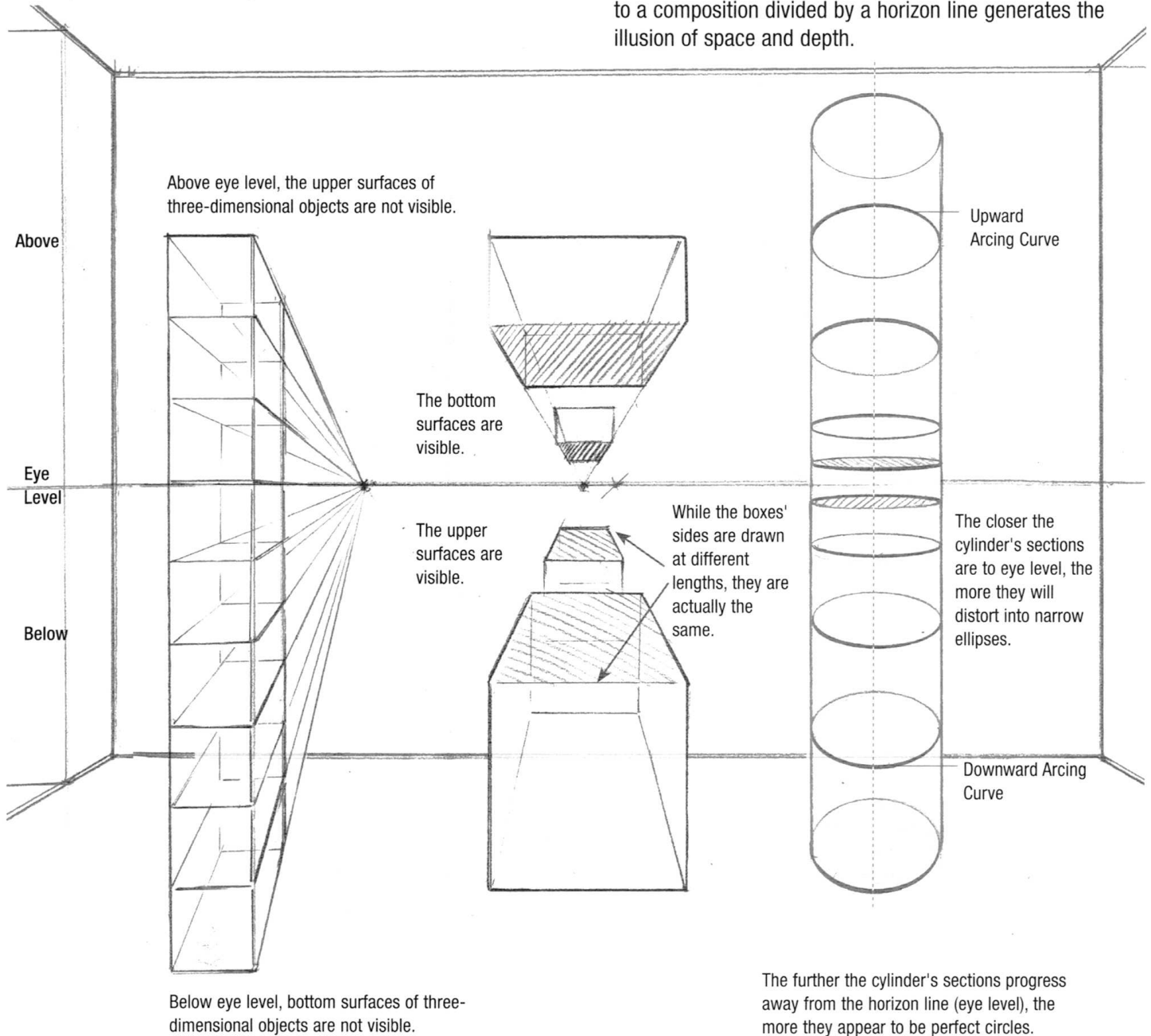


- The diagonal lines all converge at a single point.
- Note that this point is located along the horizon line (eye level).
- This point where the diagonal lines converge is called the "vanishing point."

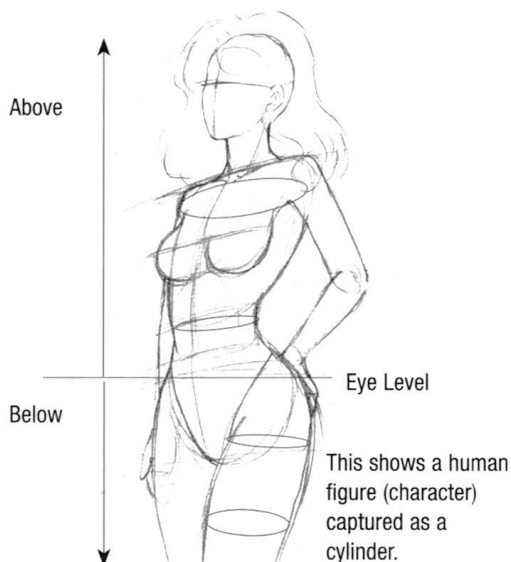


● Space and Solid Objects

Creating a sense of depth merely by adding diagonal lines to a composition divided by a horizon line generates the illusion of space and depth.

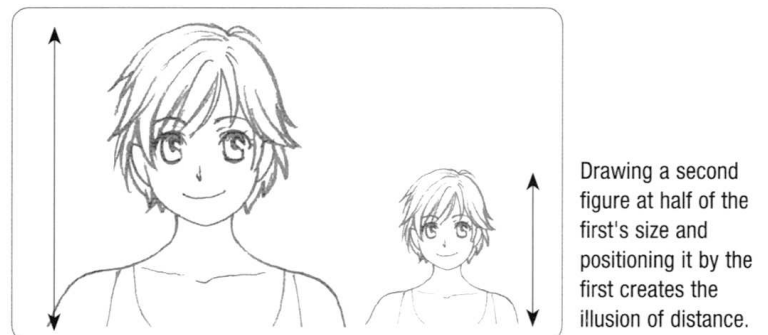


The Same Rules Apply to Figures



● Characteristics of Spaces

Making an object smaller creates the illusion that it is farther away from the picture plane.



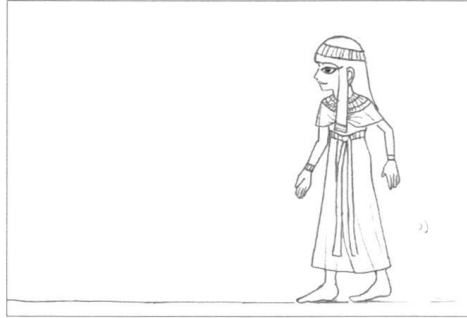
The Evolution of a Two-Dimensional

Part I: The Birth of Depth

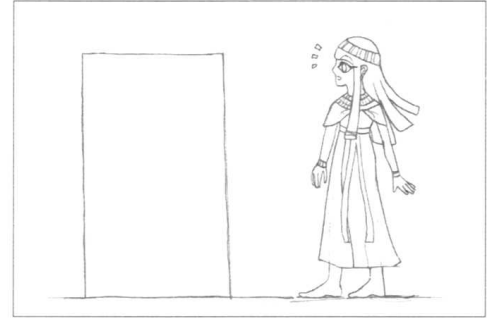
Let's look at the way that depth is born in a flat world.



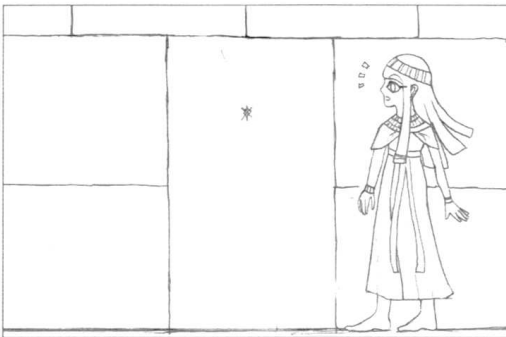
① Here we see a two-dimensional, flat world.



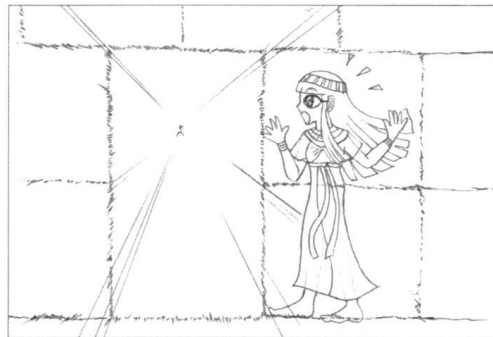
② This world has no depth. The road the character walks travels in an infinitely straight line. There are no bent edges or corners.



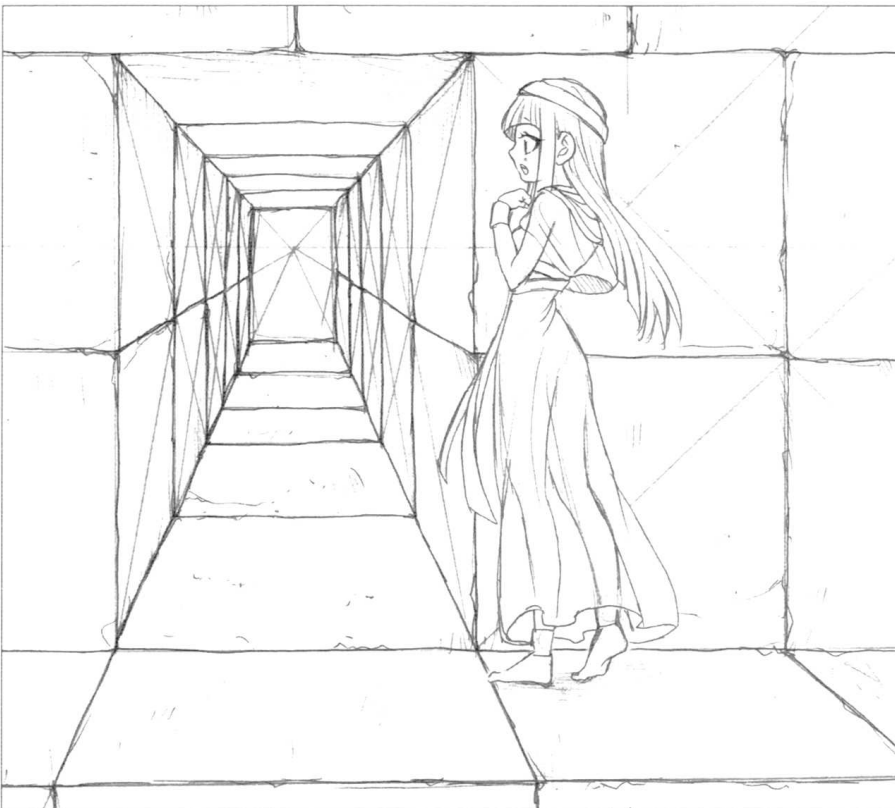
③ Now a rectangle has appeared. This is a vertical (height) and horizontal (length) world.



④ Lines travel straight up, down, right, and left. A point has appeared.



⑤ Suddenly, diagonal lines appear and converge at the point.



The diagonal lines converging at a single point create the illusion of depth. This is called "one-point perspective."

⑥ The diagonal lines cause a sense of depth to emerge, generating a three-dimensional world.

Space into Three Dimensions

One-Point Perspective at a Glance

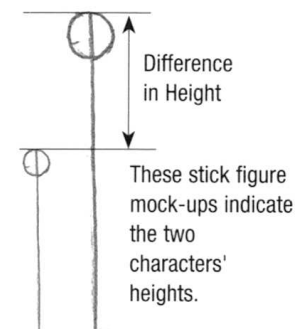
Using One-Point Perspective to Create Depth



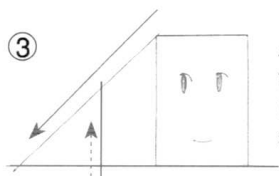
- ① At first, these sisters appear to have different heights.



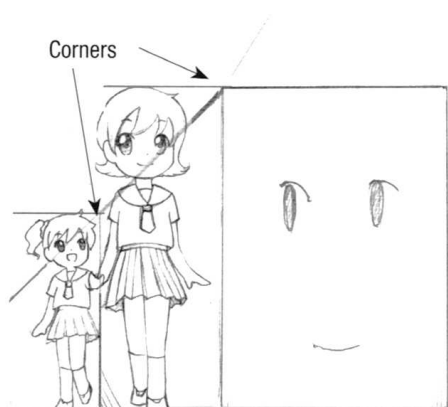
- ② This flat board positioned to the sisters' side makes their difference in height more obvious.



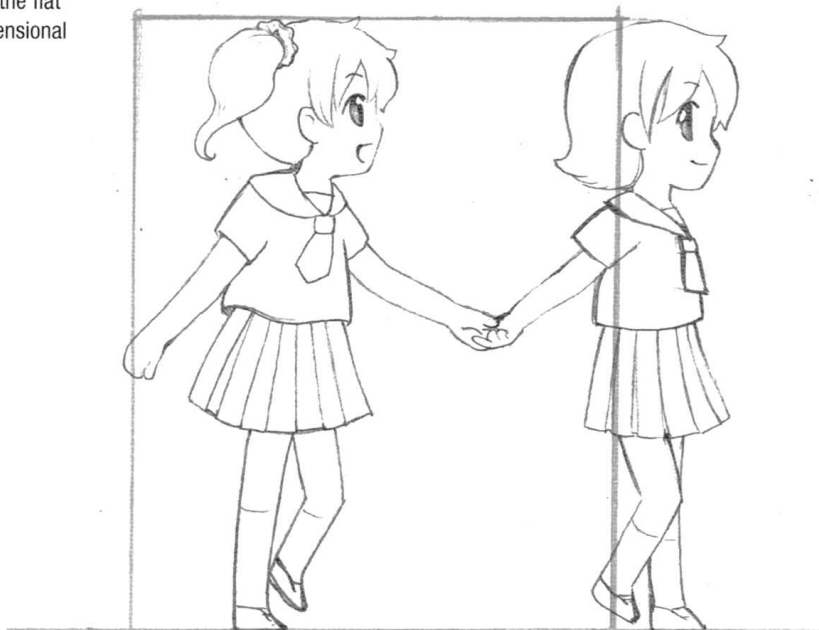
These stick figure mock-ups indicate the two characters' heights.



Applying one-point perspective techniques transforms the flat board into a three-dimensional solid box.



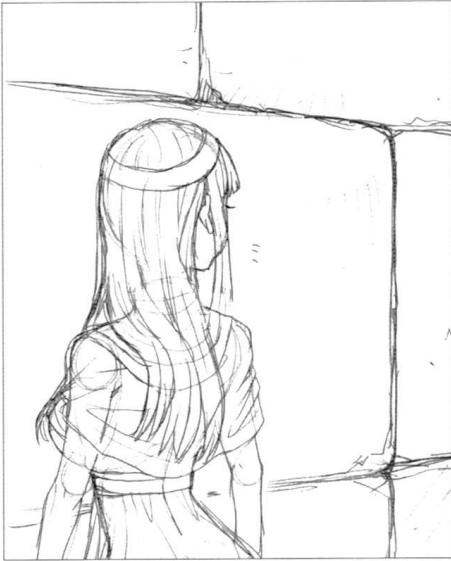
- ④ If we extend a horizontal line from the box's two corners, then we discover something new.



- ⑤ The two sisters are actually the same height.

Part II: The Birth of Right and Left Diagonal Lines

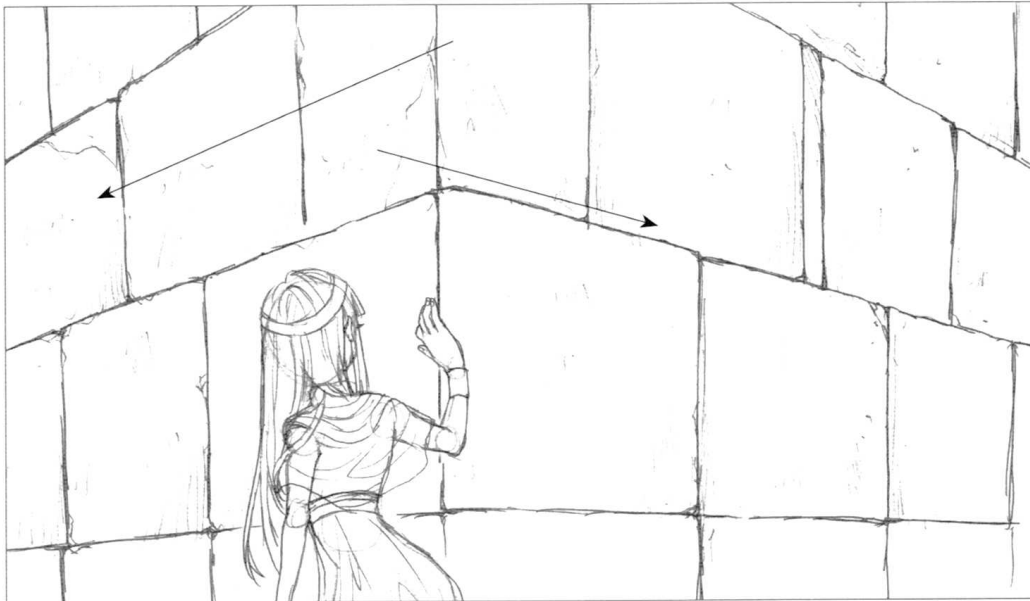
These diagonal lines create the illusion of depth and an expanding space.



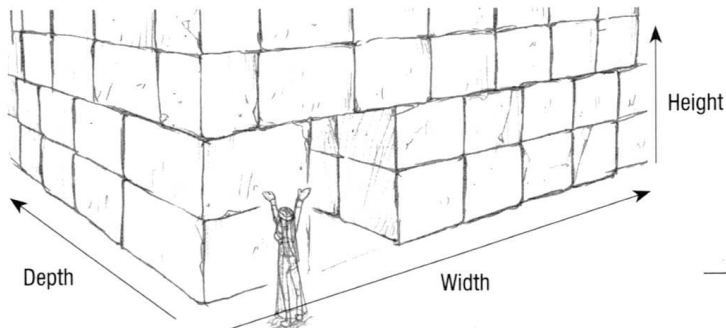
① Our heroine glances to her side.



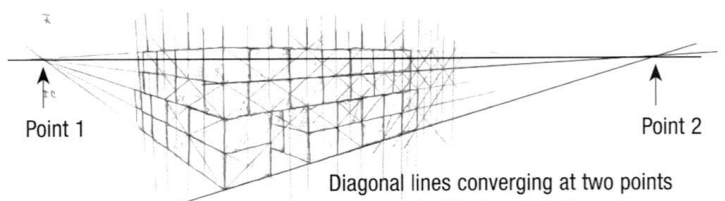
② She sees a stone wall appearing to shrink gradually as it travels into the distance.



③ Suddenly, a bent edge appears. Diagonal lines emerging from different directions create the feeling of depth and an expanding space.



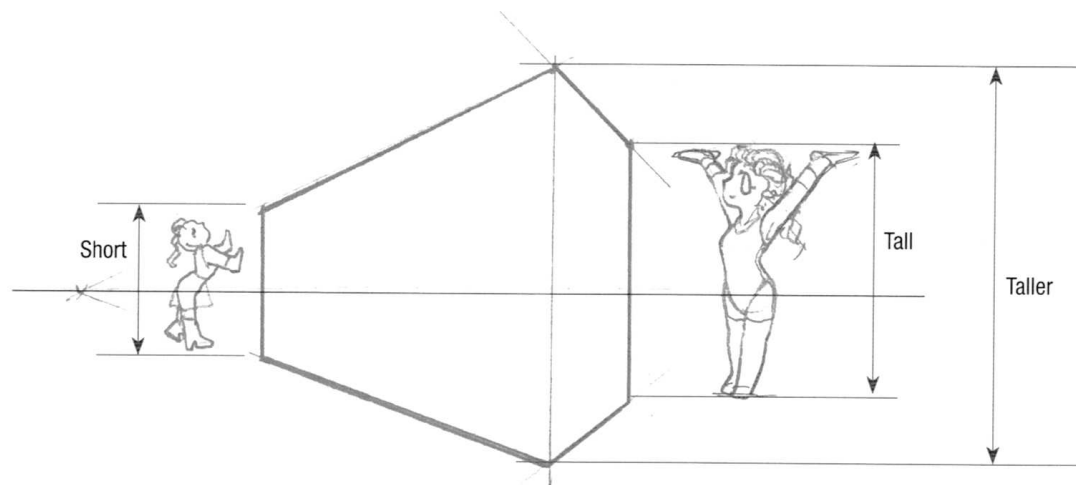
Unlike the horizon line, which is depicted using a perfectly horizontal line, the depth and width lines are portrayed using diagonals. The height is a straight, non-diagonal, vertical line.



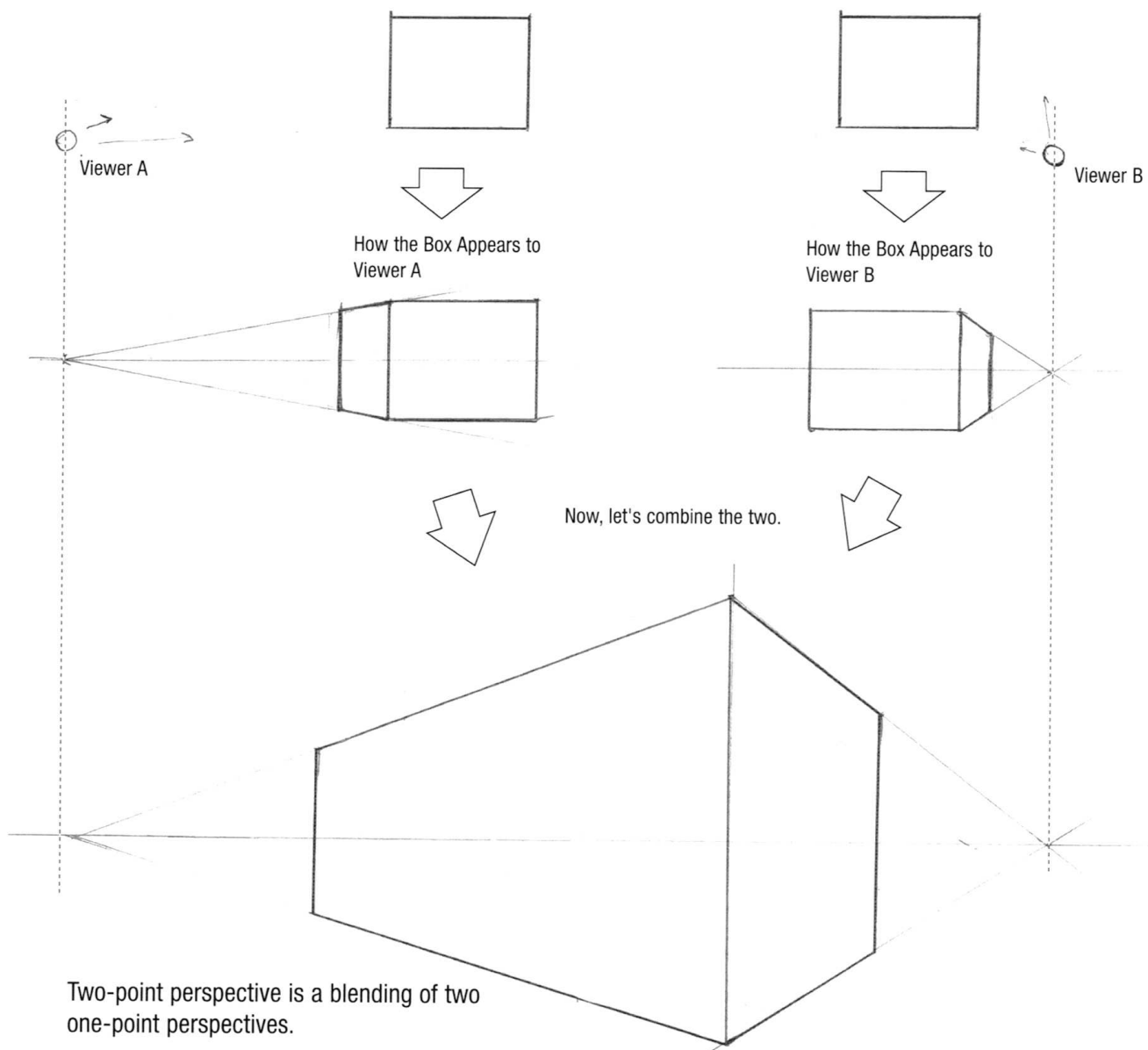
Diagonal lines converging at two points generate the illusion of depth and an expanding space. This is known as "two-point perspective."

Two-Point Perspective at a Glance

Using Two-Point Perspective to Vary Objects' Heights



Looking at the Same Box from Different Angles

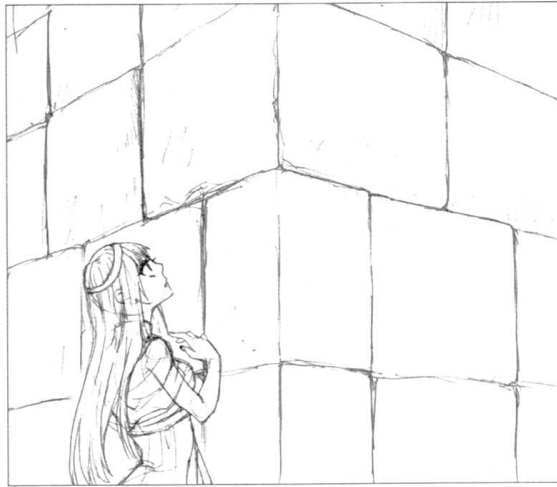


Part III: The Birth of Diagonal Lines Converging Above

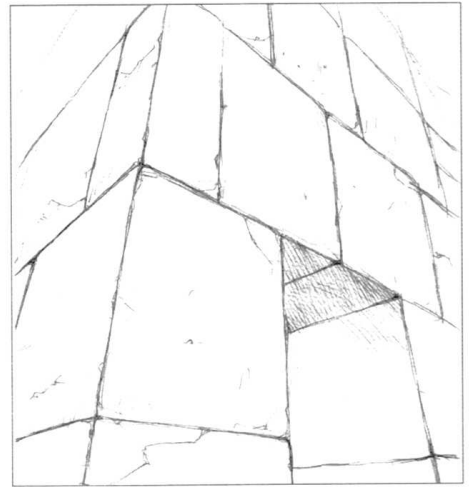
These create the illusion of depth in an upward direction, emphasizing a sense of height.



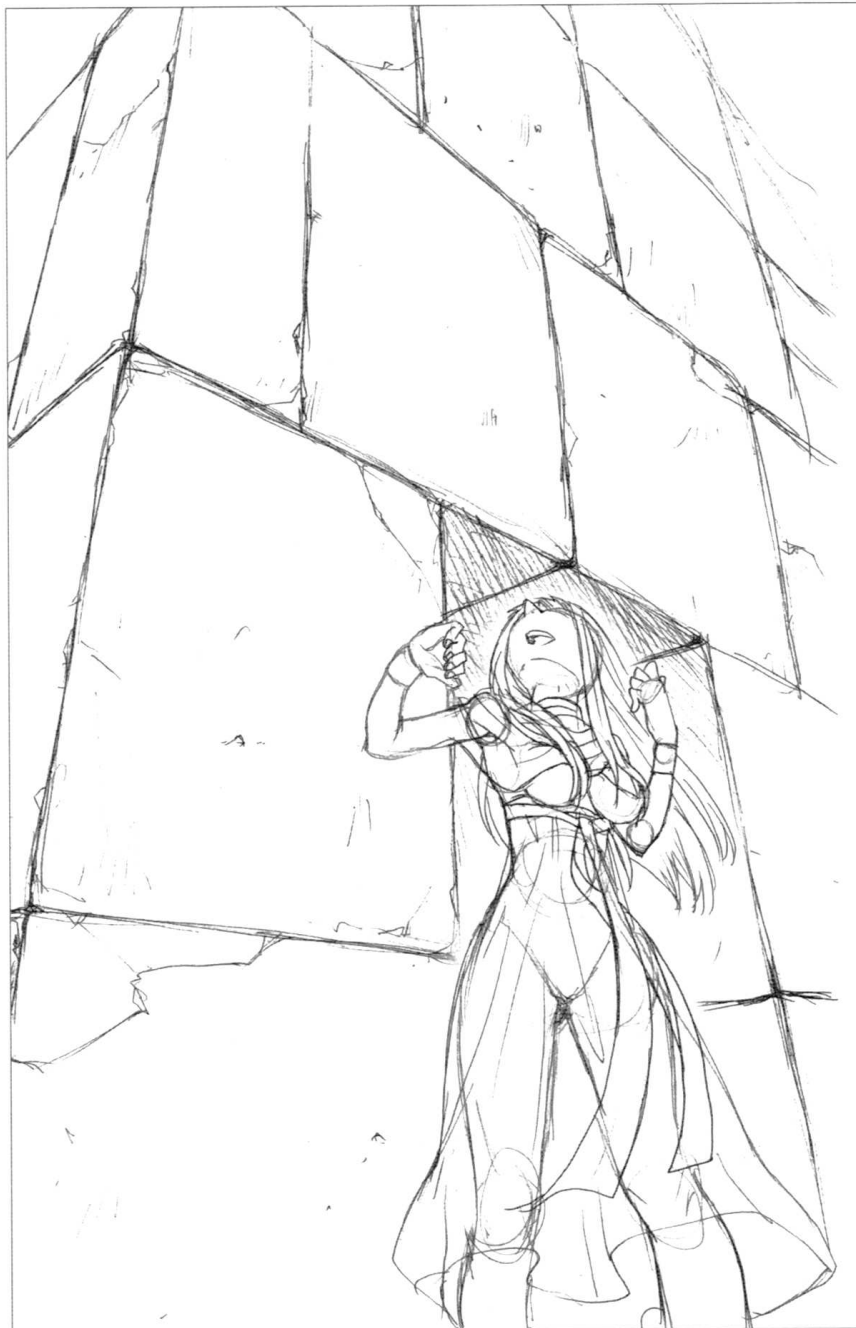
① Our heroine glances up.



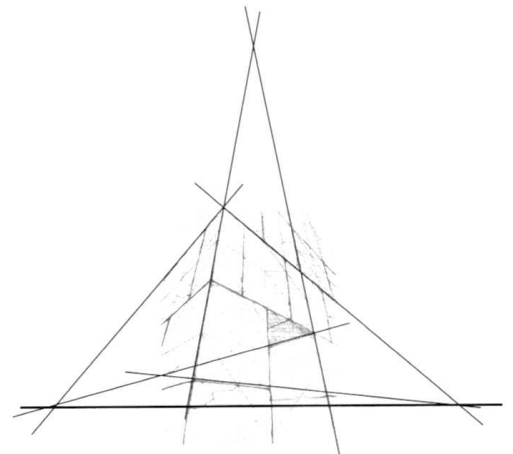
② Square stones appear stacked on top of each other all the way into the distance.



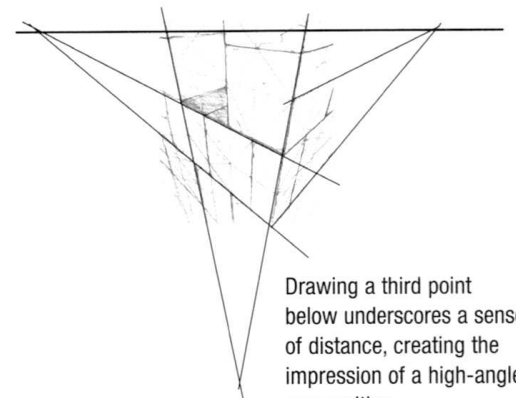
③ As she approaches, vertical lines that should run straight up instead appear diagonal. The stones also seem to gradually shrink in size. Furthermore, diagonal lines running off to the right and left appear to take on more acute angles as our heroine's eye travels up the wall.



④ Lines defining width, depth, and height are all diagonals, accentuating the sense that the space comprises three-dimensions.



Diagonal lines create the illusion of an object's length and depth traveling into the distance. This is known as "three-point perspective," a technique frequently used when portraying an object or scene from a low, side angle.

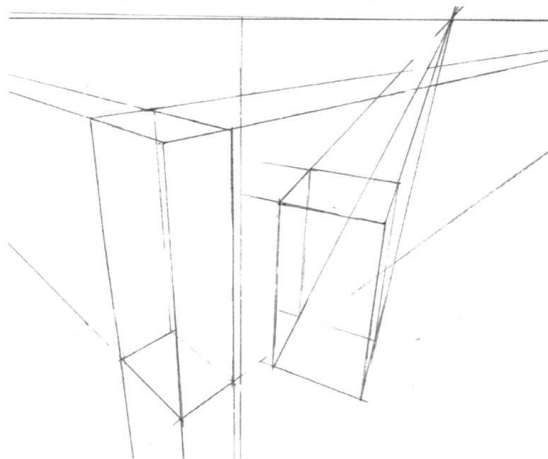


Drawing a third point below underscores a sense of distance, creating the impression of a high-angle composition.

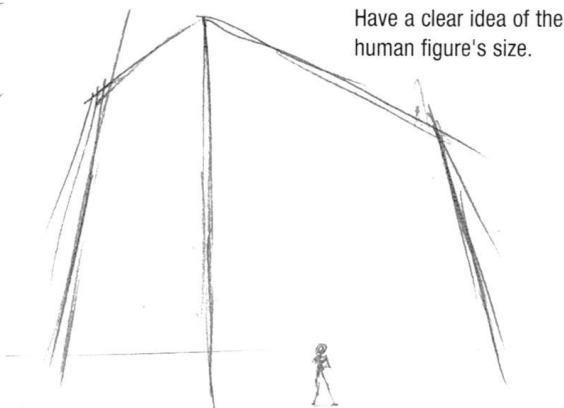
Three-Point Perspective at a Glance

Use Three-Point Perspective to Create the Illusion of Looking up or Down at an Object from an Exaggerated Angle

Consider the Appearance of a Solid Object When Drawing in Three-Point Perspective



Use three-point perspective when showing buildings or a street lined with buildings from a low or a high angle. This gives them the appearance of being gigantic objects.

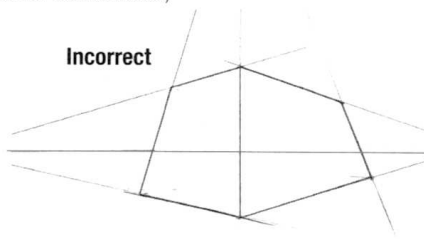


Avoid Using Three-Point Perspective to Draw Objects Falling along Eye Level

(i.e. That the Horizon Line Intersects)

Incorrect

Eye Level



This is how a solid object at eye level appears when drawn in three-point perspective. Note how it does not appear to have right angles, even though it should.

Seen from Below

Seen from Above

Correct

Low Angle

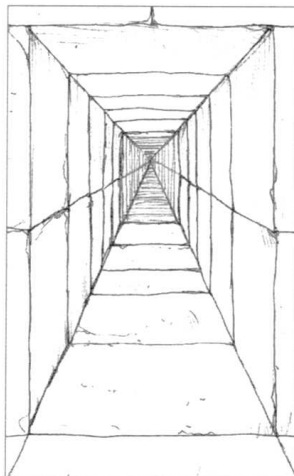
Correct

High Angle

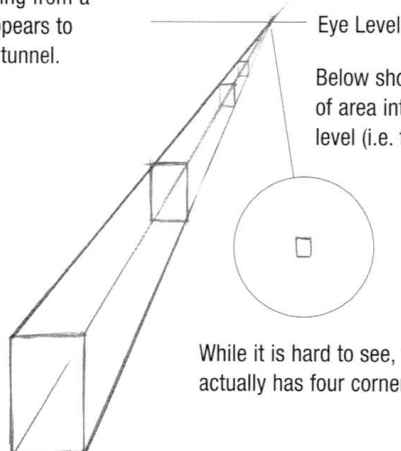
Position a point somewhere above eye level and then draw the object.

Position a point somewhere below eye level and then draw the object.

Subject: The Vanishing Point Does Not Vanish



A hole originating from a single point appears to be an endless tunnel.

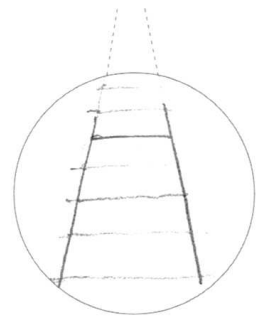


Eye Level

Below shows an enlargement of area intersecting at eye level (i.e. the vanishing point).

While it is hard to see, the point actually has four corners.

Vanishing points are referred to as such, because they appear to disappear. However, they do not really vanish.



Try to recall how a ladder appears when you look up at it or how train tracks appear running off into the distance. While these objects appear to come to far off points, they do not actually vanish.

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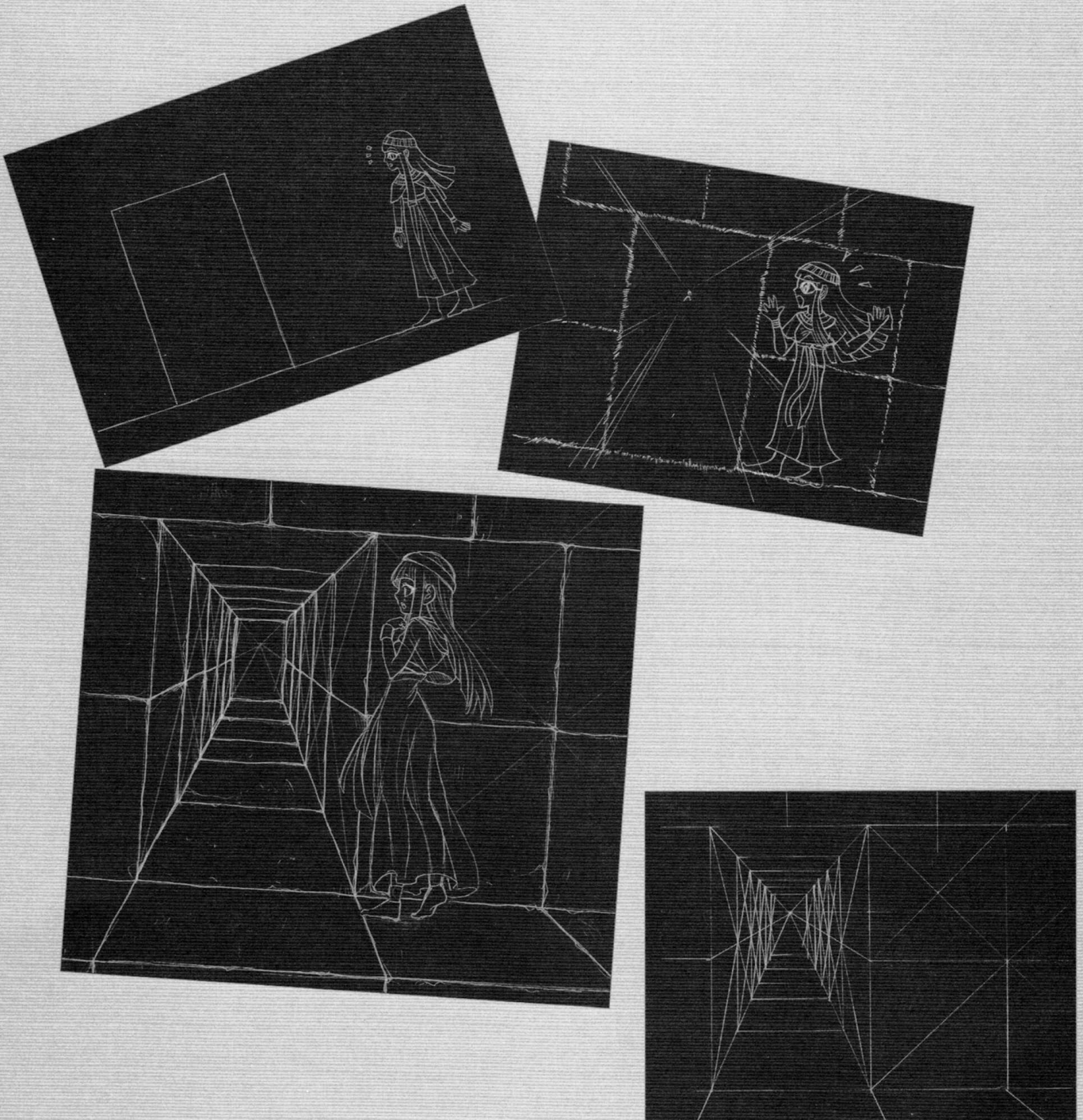
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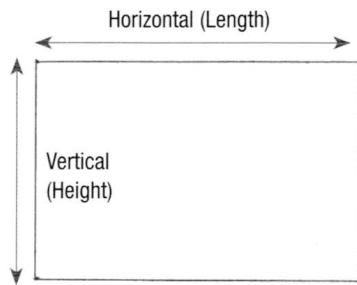
Chapter 1

Basic Compositions Begins with One-Point Perspective

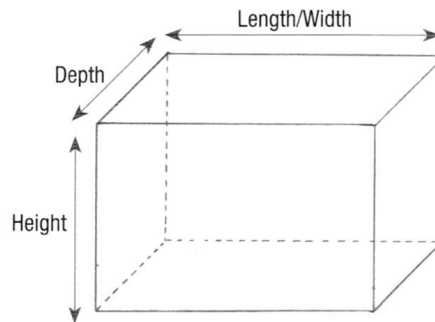


The Basics of One-Point Perspective

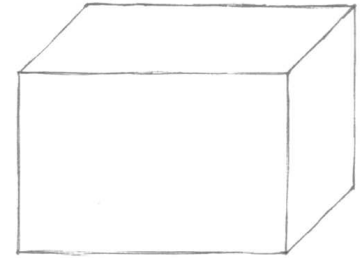
This is a drawing technique used to make objects appear three-dimensional. It employs diagonal lines to generate an illusion of depth and evoke a sense of space.



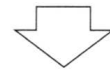
Flat Objects Have Two Dimensions



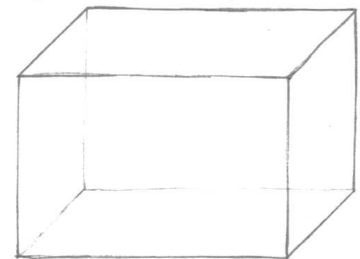
Solid Objects Have Three Dimensions



The above shows a solid object viewed normally. Note that only three sides are visible.



Transparent Perspective Projection



In a transparent perspective projection, the box's bottom and interior walls, which would normally be obscured from view, are visible. When sketching landscapes and other settings as well as solid objects, including areas that will be hidden in the final composition helps you to capture a space with depth.



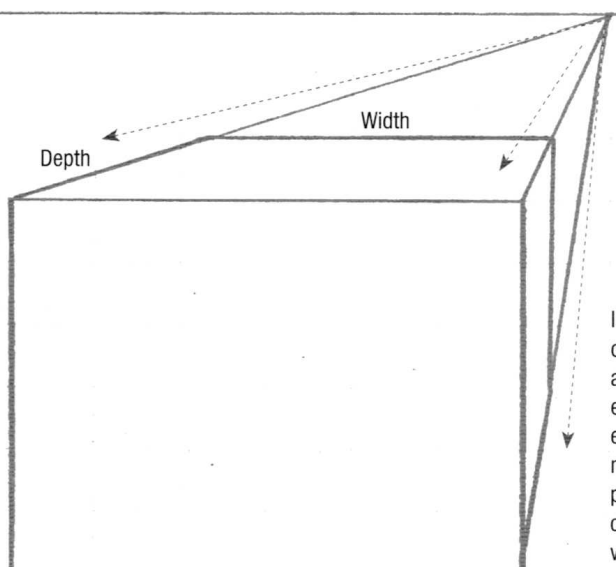
Flat, Two-Dimensional Figure



Three-Dimensional Figure: Show fabric creases to the clothing and give the figure volume to make a character appear three-dimensional.

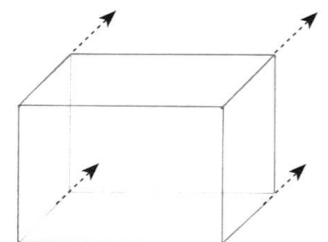
Solid Drawn Using One-Point Perspective

Giving an Object Perspective as the Eye Moves Back in Space: Part I



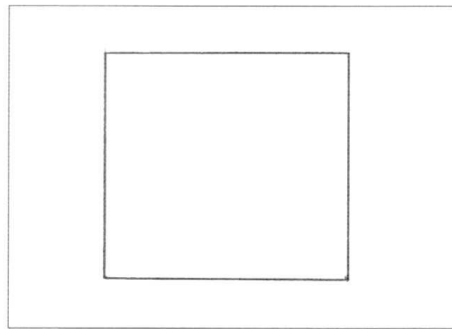
This point is referred to as the "vanishing point."

In one-point perspective, all depth lines converge at a single point (you may also draw the lines as if they appear to emerge from a single point). This emphasizes the sense of depth and makes surfaces close to the picture plane appear to be jutting forward, creating three-dimensionality with visual impact.

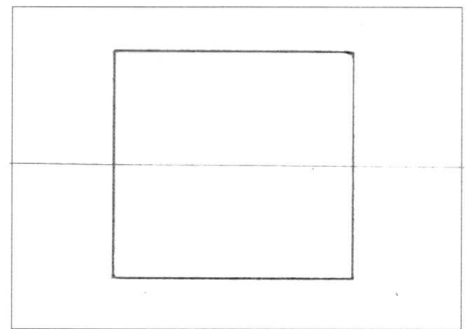


The above shows a solid object with all depth lines drawn parallel to each other. While the object appears three-dimensional, the far surface appears wider than the front.

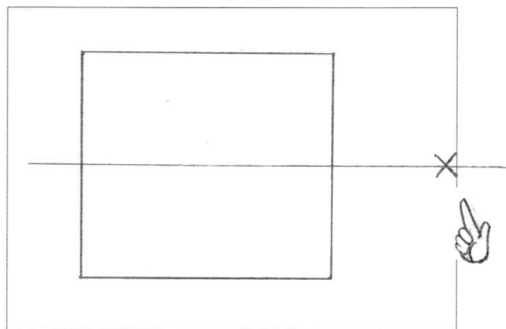
The Sketching Process



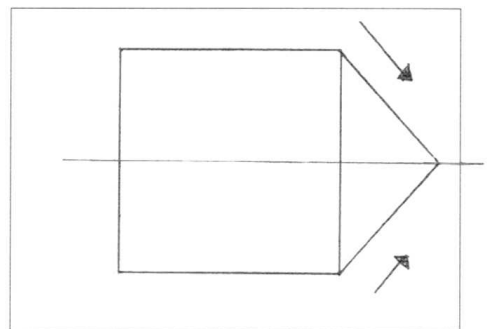
① Draw a square.



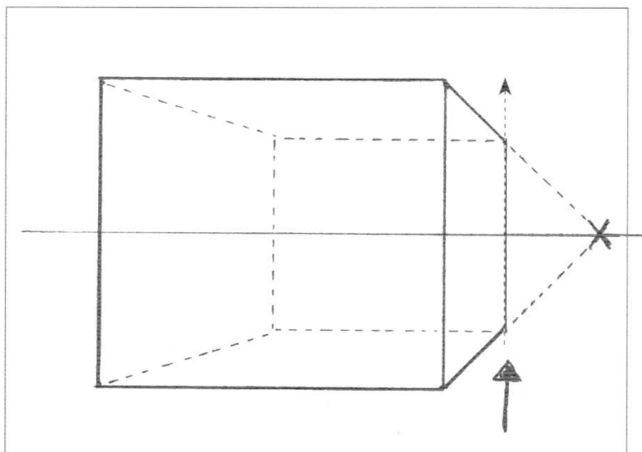
② Add the horizon line.



③ Draw a point somewhere along the horizon line. (This establishes the vanishing point.)



④ Draw diagonal lines originating from the square's corners and converging at the vanishing point.



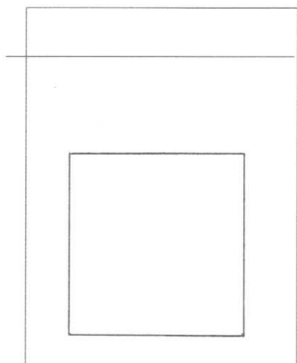
⑤ Add a single, vertical line.

Voilà!

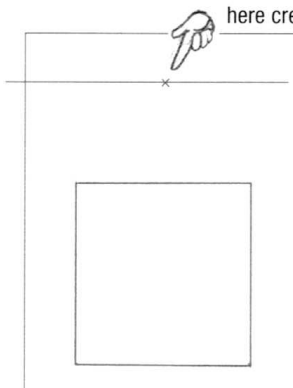


Giving an Object Perspective as the Eye Moves Back in Space: Part II

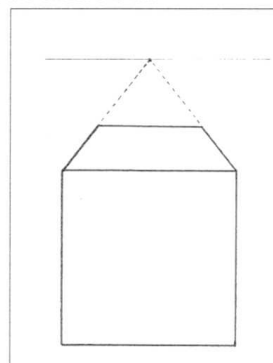
Positioning the vanishing point around here creates the effect shown.



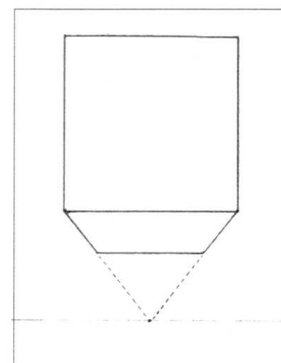
① Draw the horizon line above the box.



② Draw a point. (Establish the vanishing point.)



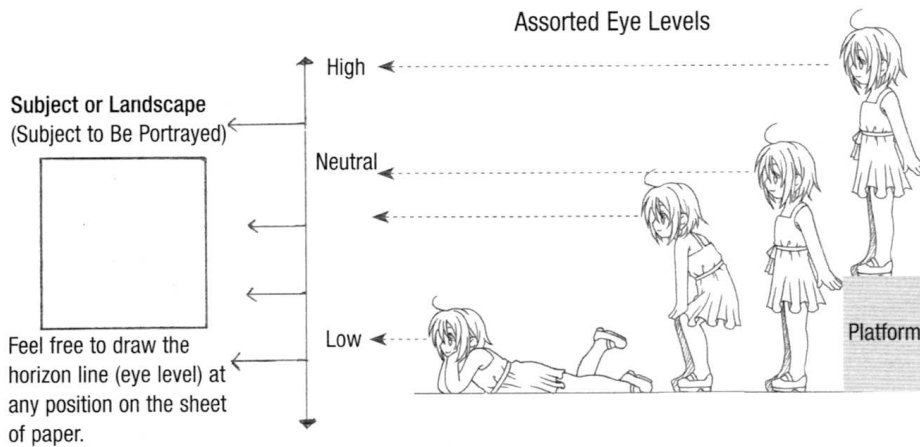
③ The result is a solid object drawn at a high angle.



④ Bringing the horizon line below the object makes us think we are seeing a solid object viewed from a low angle.

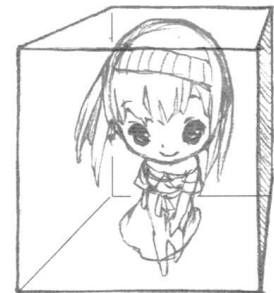
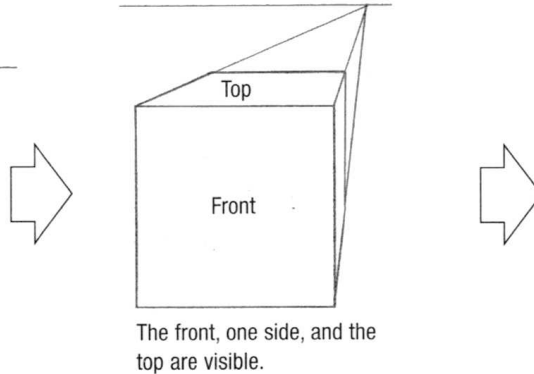
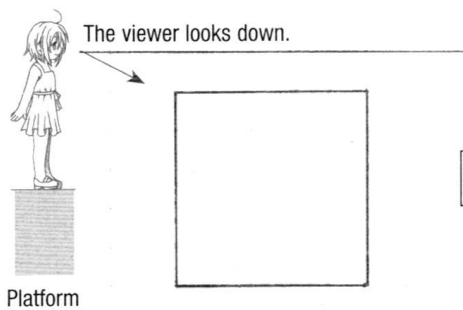
Where to Position the Horizon Line

Establish where to position the horizon line (the viewer's eye level) according to what angle you intend the viewer to view the subject matter. When you intend for the subject matter to be viewed from above, then position the horizon line (eye level) high on the composition. When you want the subject matter to be viewed from below, then position the horizon line (eye level) low on the composition.



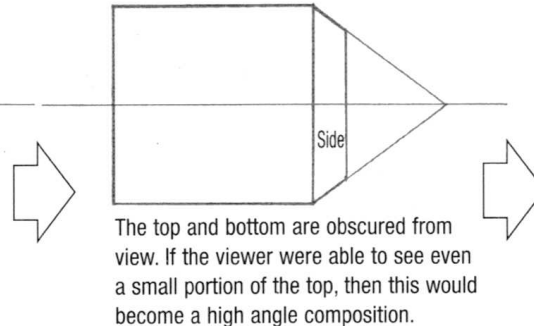
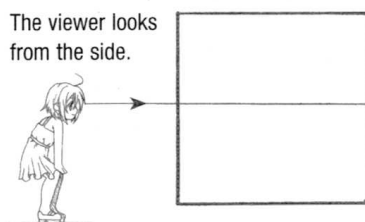
Eye level may be divided into three angles: low (worm's eye view), high (bird's eye view), and neutral (straight on).

Composing from a High Angle/Bird's Eye View



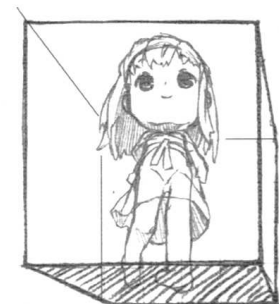
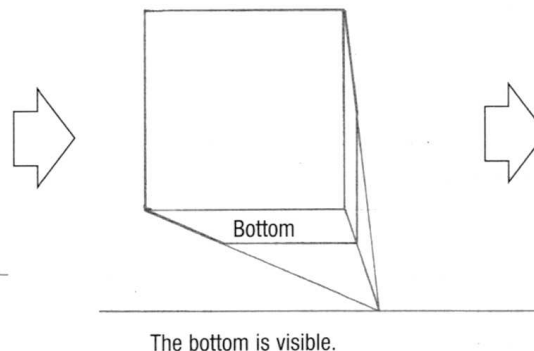
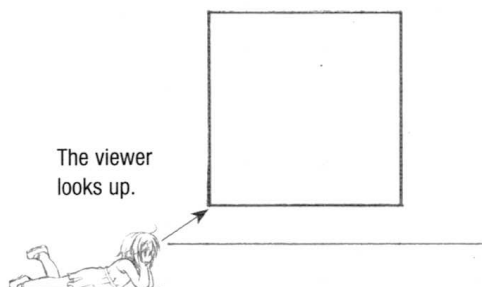
This is considered a "high angle" or "bird's eye view."

Composing from a Neutral Position/Straight On



A straight-on view is referred to as a "neutral" position or angle.

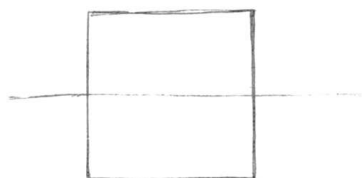
Composing from a Low Angle/Worm's Eye View



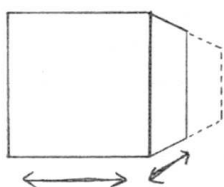
This is referred to as a "low angle" or "worm's eye view."

Where to Position the Vanishing Point

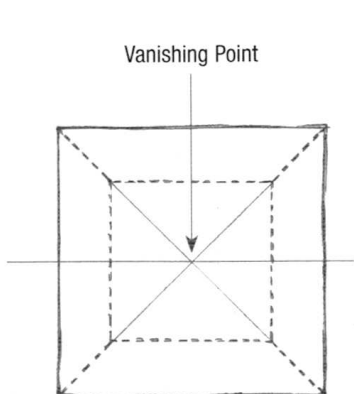
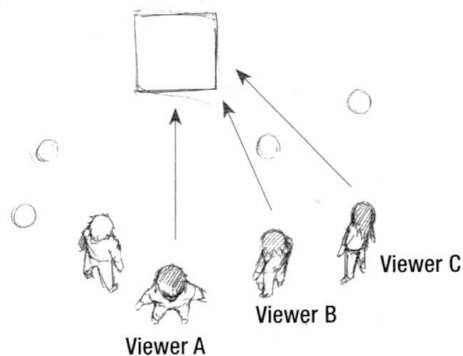
To establish where to position the vanishing point, consider from what angle the viewer is looking at the composition (i.e. how much of the subject's surfaces should be visible).



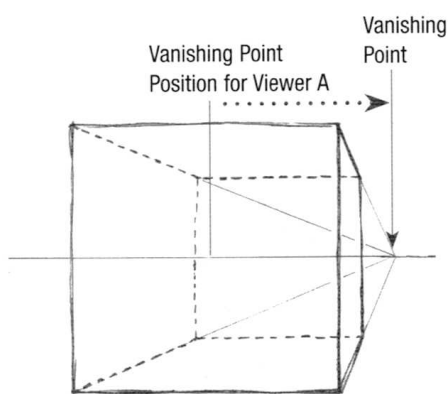
From a neutral, straight on position, neither the top nor the side is visible.



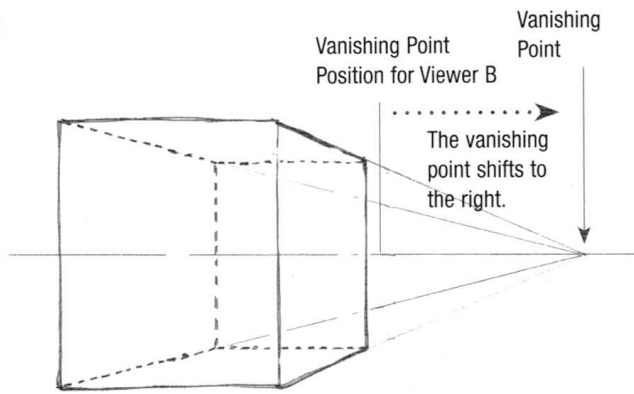
However, moving to the side brings the box's side into view.



A Viewer A is looking at the solid from straight on.

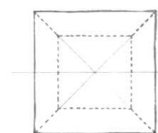
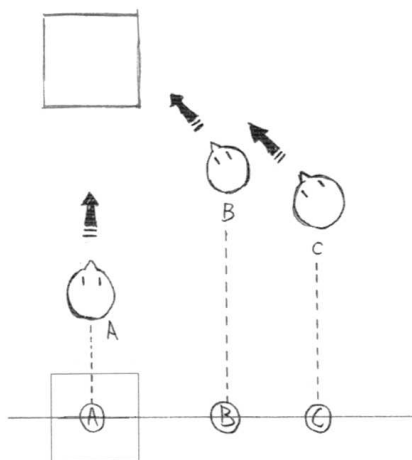


B Viewer B is looking at the solid from a neutral angle, but slightly to the side.

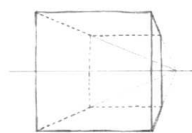


C Viewer C has shifted even further to the side than Viewer B in order to see the solid object's side.

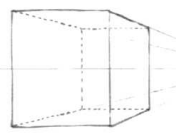
The Vanishing Point Shifts to the Right or Left, According to the Viewer's Position



Solid's Appearance from Viewer A's Perspective



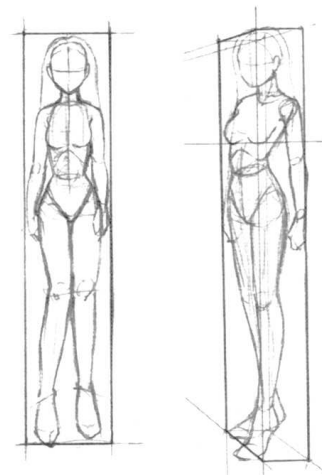
Solid's Appearance from Viewer B's Perspective



Solid's Appearance from Viewer C's Perspective

Subject:

Position human figures in a box and maintain awareness of how the figure appears as a solid when drawing.



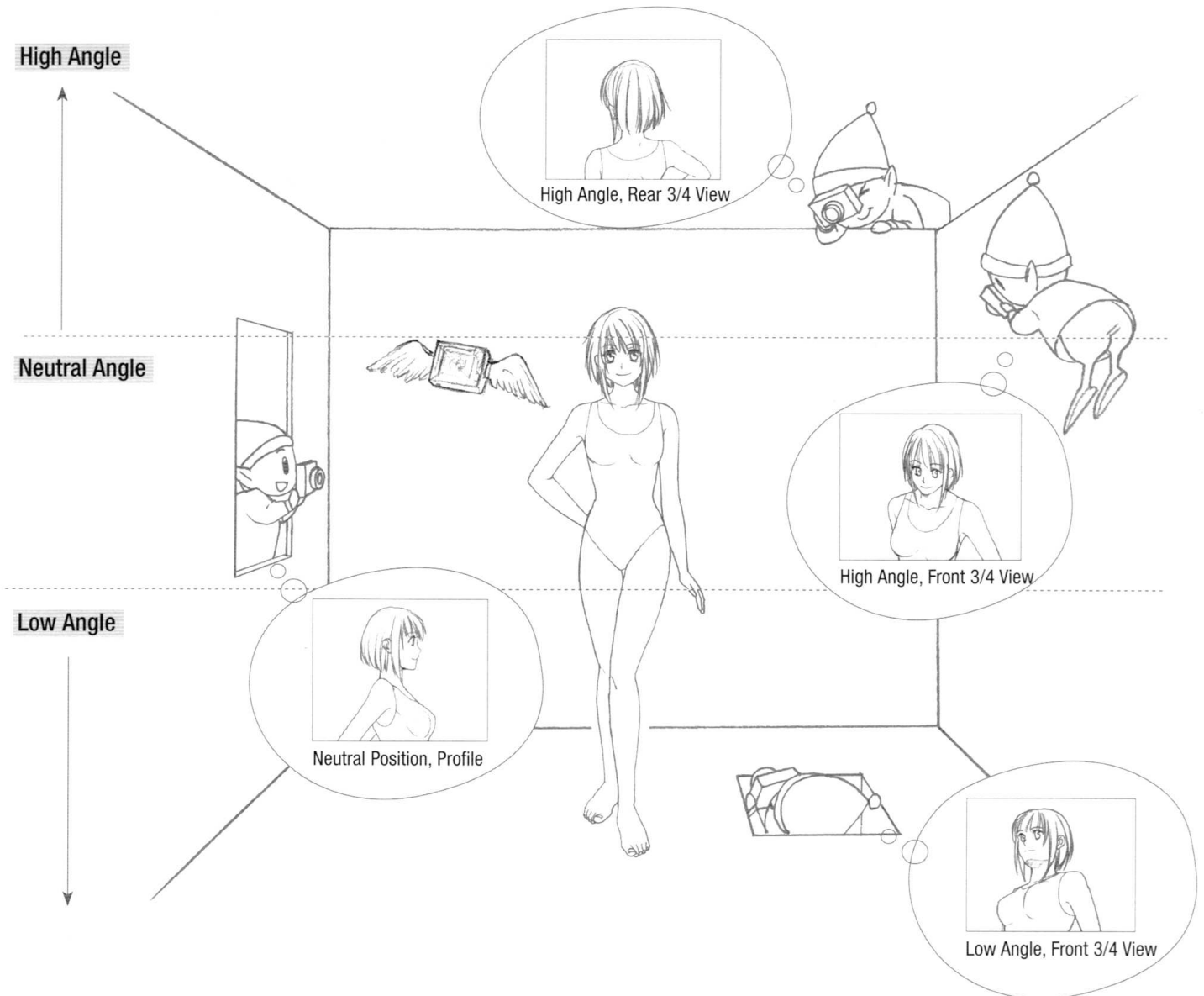
This character is a sphere, but she does not look like one.



Now that she has been placed in a box, we can see that she really is a sphere.

Using Angles of Perspective Appropriately

A character's appearance changes according to the angle of composition. Draw figures in a box to capture the desired form.



● Close-ups

High Angles Are Also Bird's Eye Views

Rear 3/4 View



Front 3/4 View



Draw the top of the box.

Very Low Angles Are Also Worm's Eye Views

Front 3/4 View



Visualize the bottom of the box when drawing.

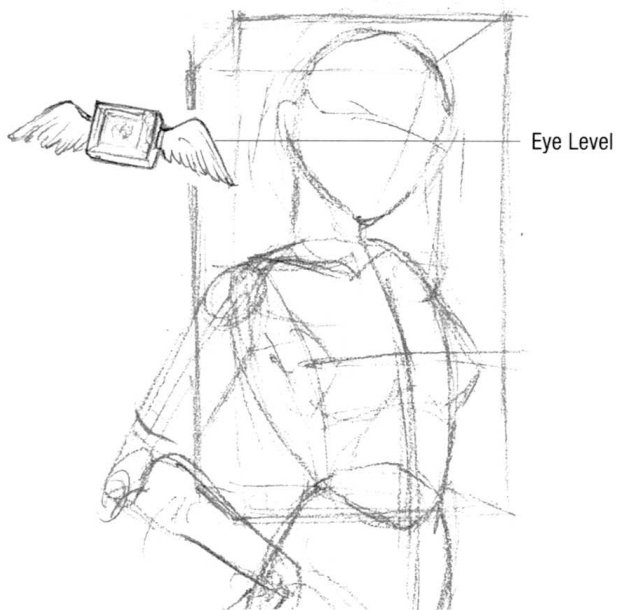
Neutral Position/Composed Upward from the Chest

Profile



Figures depicted in profile may be composed from a moderately low or high angle.

Neutral Position/Eye Level



The above shows a common close-up. The horizon line is positioned at the character's eye level. Compose the body from a high angle.

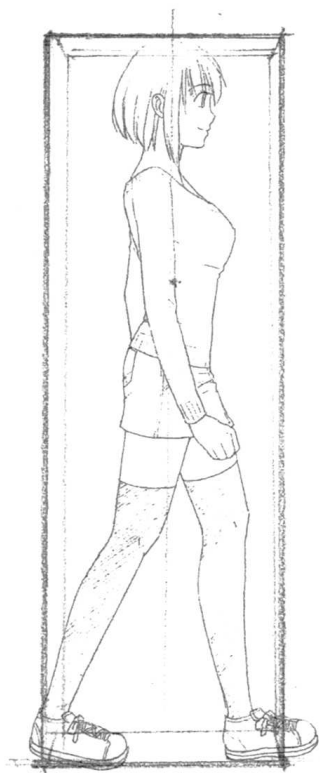


● Full Figure Compositions These are composed similar to the close-ups.

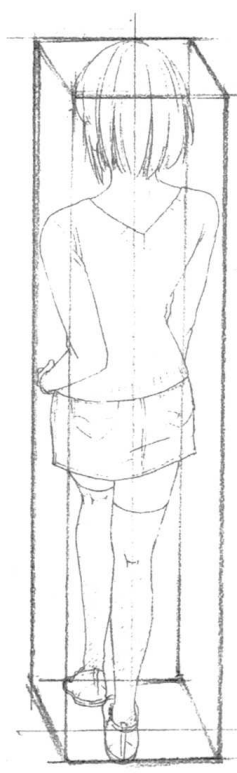
Neutral Position

High Angle

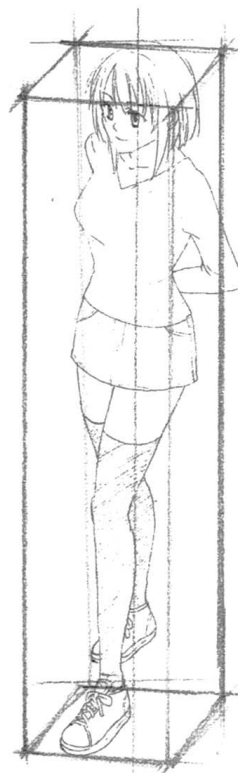
Low Angle



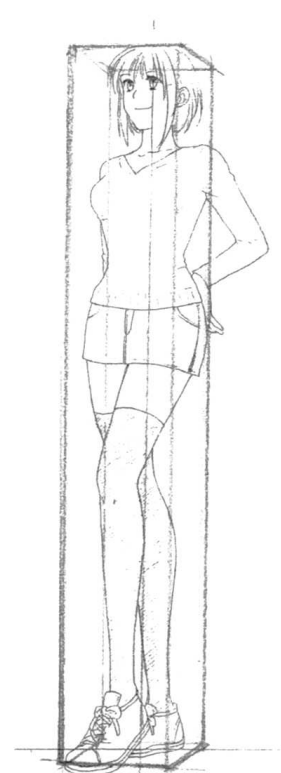
Profile



Rear 3/4 View



Front 3/4 View



Front 3/4 View

Learning How to Portray Depth in a Corridor

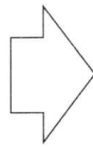
Corridors have clearly defined depths, which make them an ideal point of departure for learning all of the basic skills needed to draw anything from room interiors to roads, shop-lined streets, landscapes, and spaces that house characters.

Drawing a Corridor Using One-Point Perspective

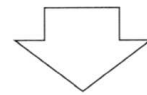
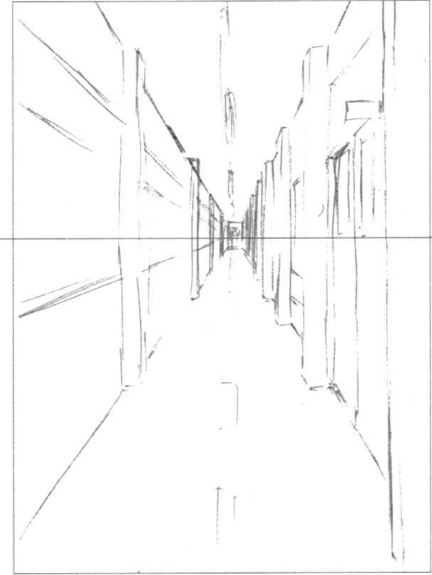
Maintain consciousness of the scale of characters and other objects when drawing.

● Establishing the Horizon Line and Vanishing Point at the Rough Draft Stage

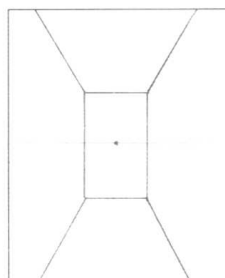
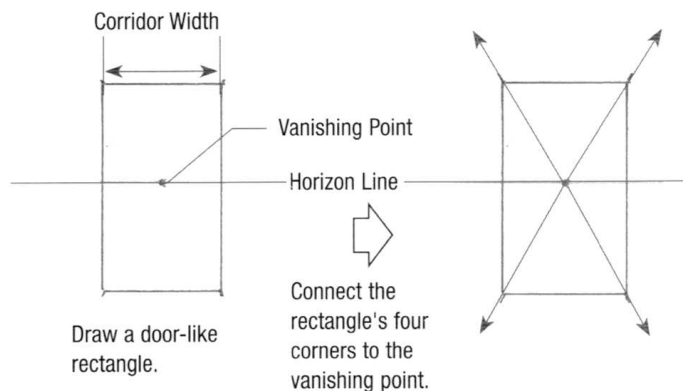
① Sketch a rough draft.



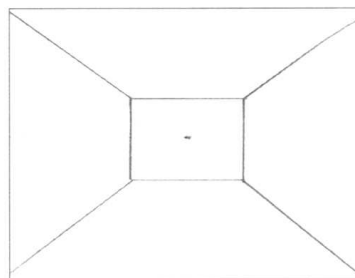
② Draw the horizon line. This divides the world above from the world below.



Once the corridor's width is established, then its general appearance becomes set.



Narrow Corridor



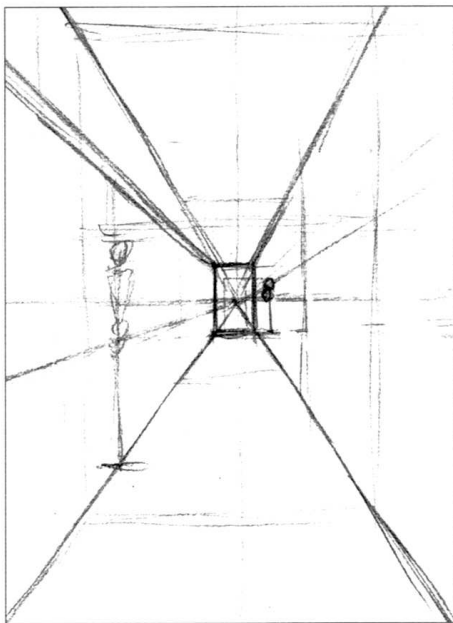
Wide Corridor: This could be a wide corridor, a hall, or even a room.

Diagonal Lines Defining the Ceiling



Diagonal Lines Defining the Floor

③ Establish where the diagonal lines defining the ceiling converge with those defining the floor. This point of convergence becomes the vanishing point.



④ Rough Sketch Inception Stage



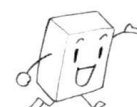
Use the established vanishing point as the point of departure for sketching the subject. When starting a new drawing, begin by establishing the size of a human being and the positions of the ceiling, walls, and floor.

So then, how does one make a corridor look like an authentic corridor? It is the inclusion of windows, doors, projecting masonry supports, or florescent lighting. Of these items, properly rendered doors and windows are the most vital toward creating a convincingly deep space.



⑤ Final Composition of Corridor

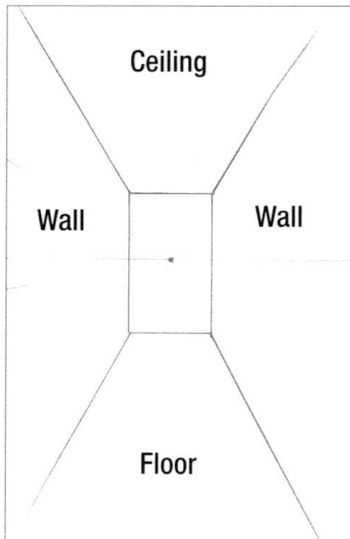
Mock-up figures (stick figures) are important toward achieving this.



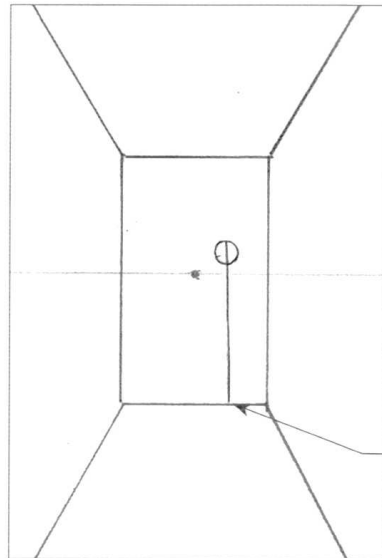
Mock-up Figure

Figures Are the Basis of Measurement for All Objects in a Composition

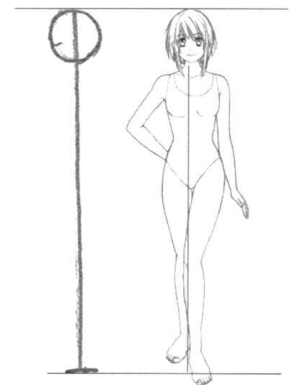
● Moving a Character around a Room's Floor: Transferring a Mock-up Figure around a Space



The above shows a corridor's most basic form. However, it shows no indication of how high to position the windows or doors.

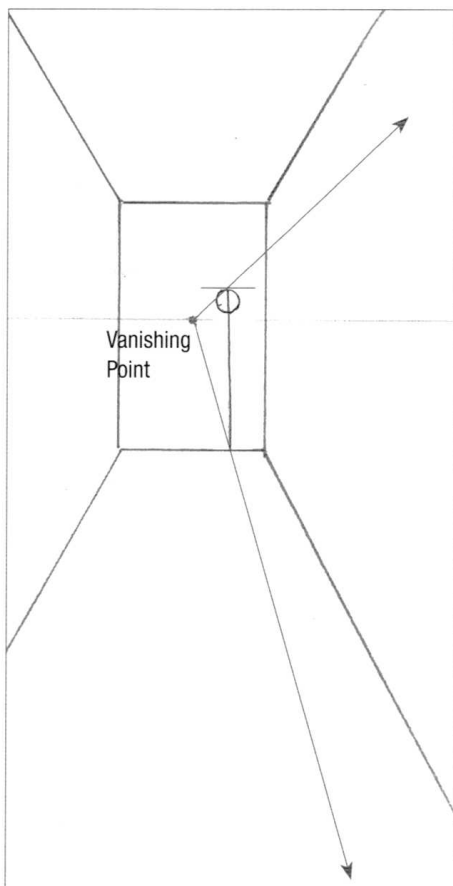


① Add a mock-up figure.

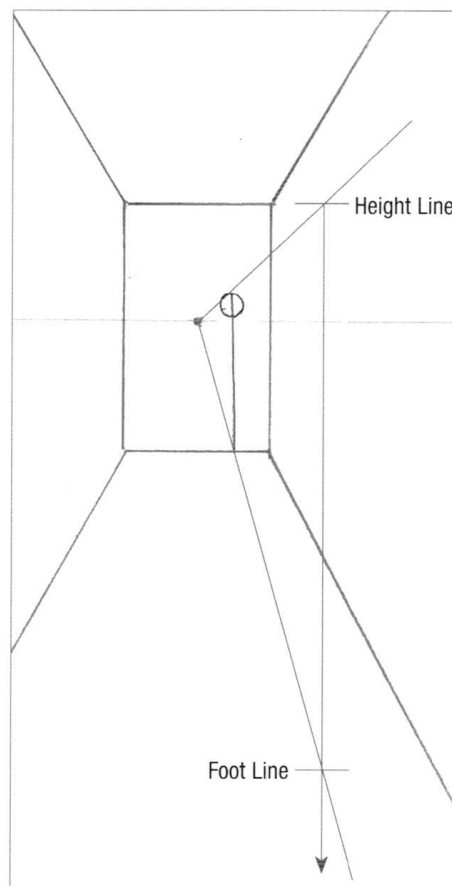


The mock-up figure represents the actual character.

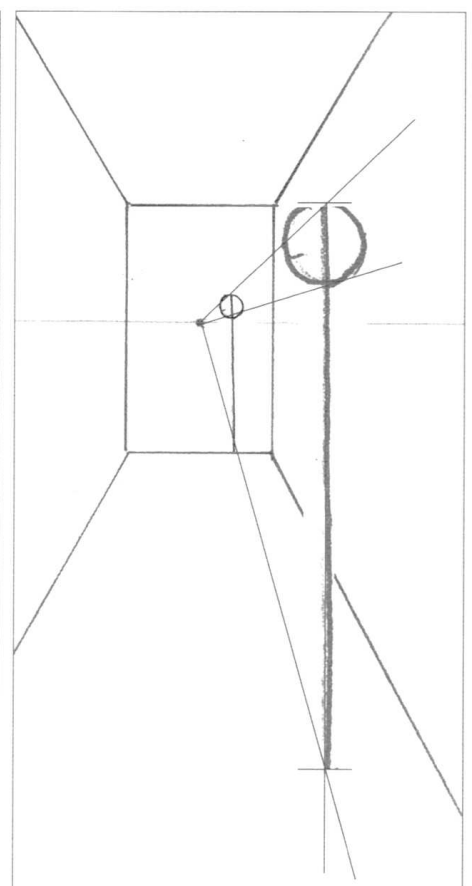
Always make sure the feet touch the floor line.



② Draw lines connecting the vanishing point to the mock-up figure's head and feet.



③ Draw a vertical line extending to the foot line in the position where you intend to place the character. This establishes the height of the character when she stands closer to the picture plane.



④ This method of connecting the vanishing point to the character's height line constitutes the most basic trick for making skillful use of perspective when positioning a character in a space.

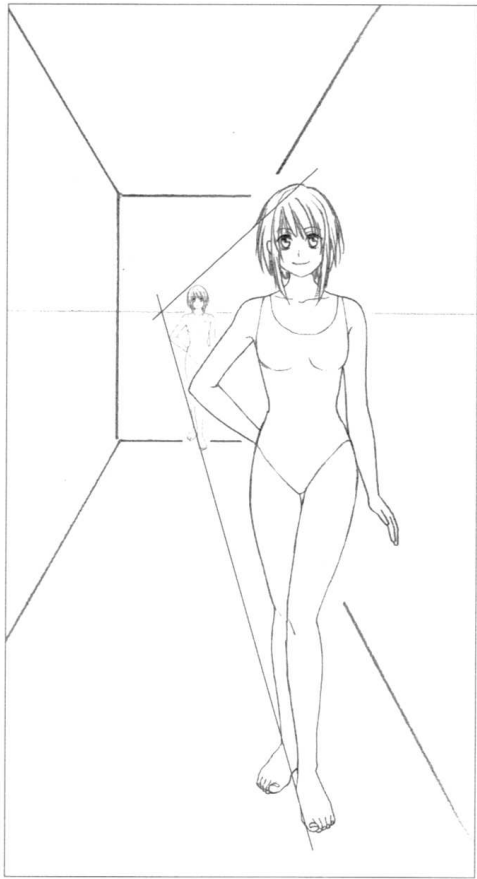


The line connecting the top of the character's head and the vanishing point can be considered the "height line."



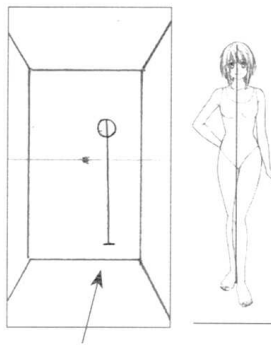
The "foot line" connecting the character's feet to the vanishing point is typically called the "ground line."

Correct

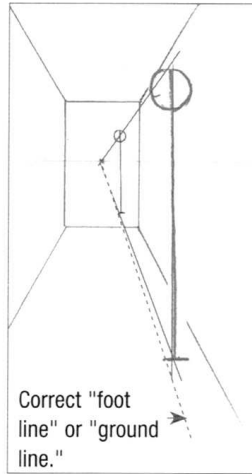


This is how to draw a figure next to a wall close to the picture plane.

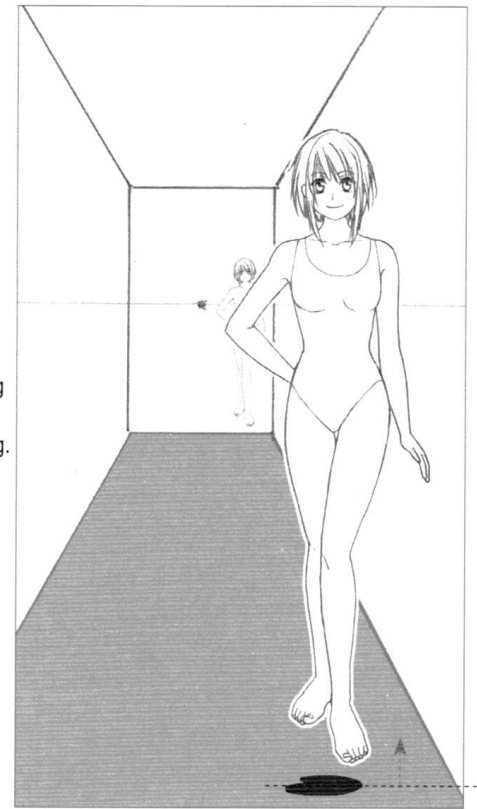
Incorrect



If the mock-up figure is hovering over the ground line, this will affect the character's positioning.



Correct "foot line" or "ground line."

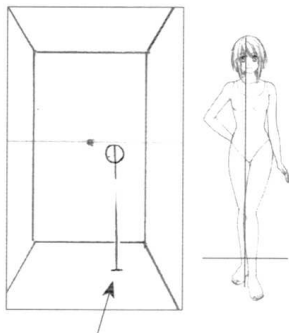


The character near the picture plane appears to be floating.

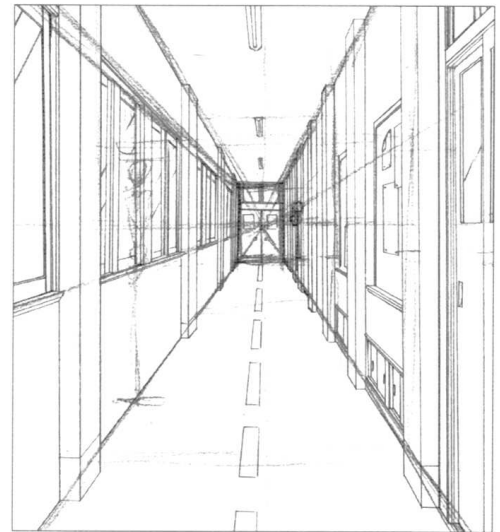
Incorrect



The character's feet become buried beneath the floor.



If the mock-up figure's feet are lower than the floor, this will affect the character's positioning.

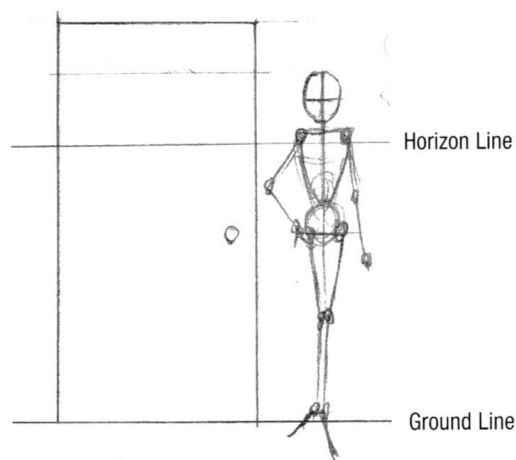


This shows an intermediate sketch overlapping the final composition. When sketching, transfer the mock-up figure around the space to establish how high to make the windows and how tall to make the doors.

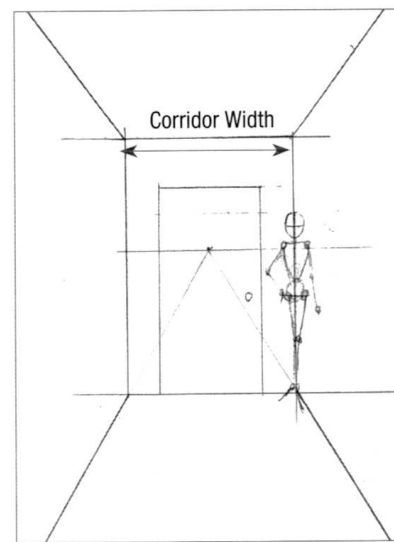


Use mock-up figures in place of a ruler to establish the scale of objects and buildings in a composition.

Drawing Doors and Windows on the Sides of a Corridor

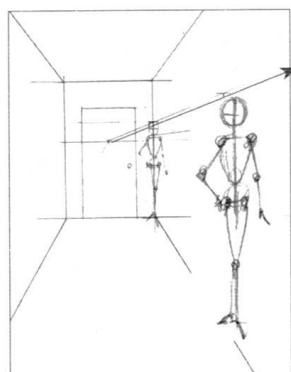


Draw a straight-on view of a door next to a mock-up figure.



Determine the corridor's width and draw lines from each corner to establish the ceiling, the two walls, and the floor.

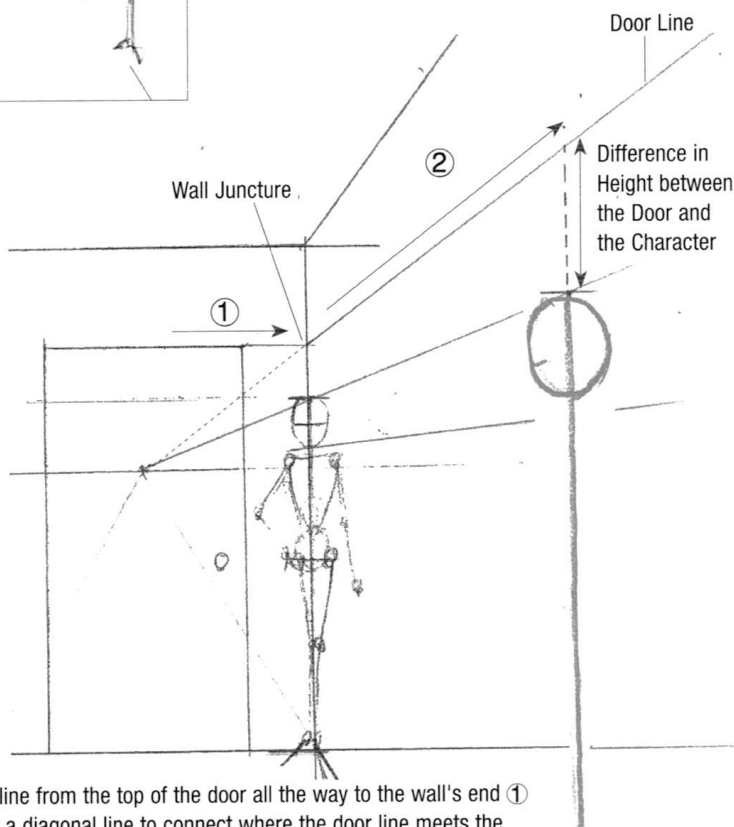
● Transferring a Mock-up Figure around the Corridor to Establish the Door Line



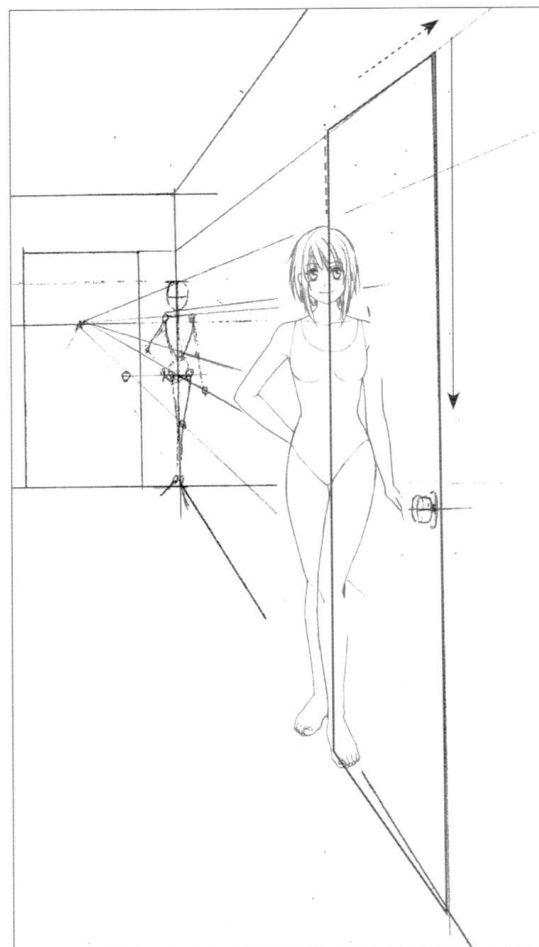
Transfer a mock-up figure along the wall and sketch in a door approximately where you intend to position one.



The mock-up figure will look something like this. However, don't worry. Remember she serves only as a guide while you are sketching.



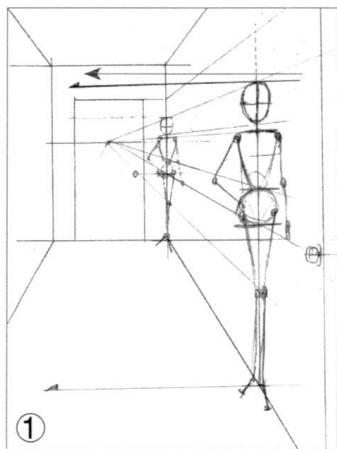
Extend a line from the top of the door all the way to the wall's end ① and draw a diagonal line to connect where the door line meets the juncture of the two walls to the vanishing point ②. This becomes the "door line," which represents the height of any door.



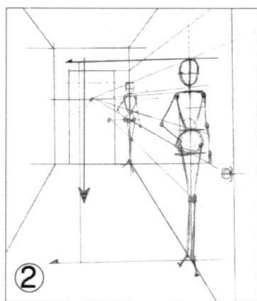
Draw vertical lines according to how wide you envision the doors to be. Now you have finished the door.

● Transferring a Mock-up Figure to Draw a Door on the Opposite Wall

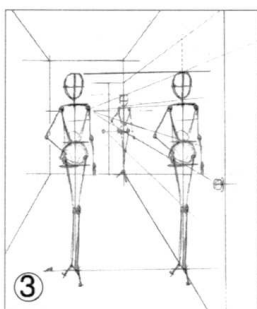
Transferring the Position of a Mock-up Figure



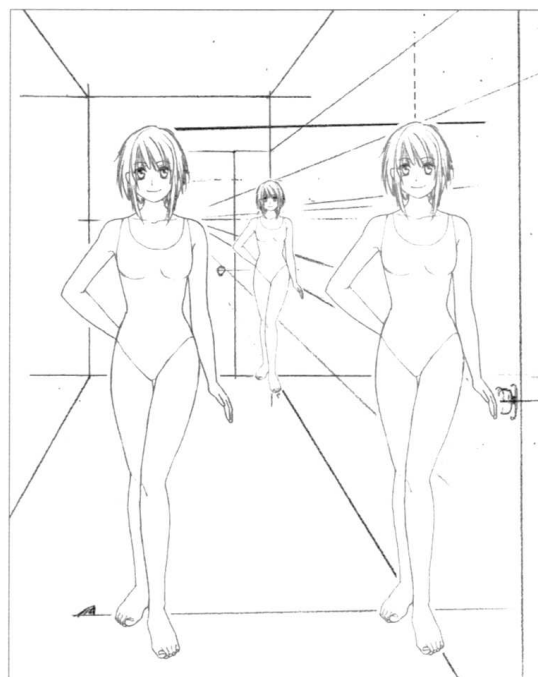
① Draw horizontal lines from the top of the mock-up figure's head and feet.



② Draw vertical lines where you intend to have characters stand.

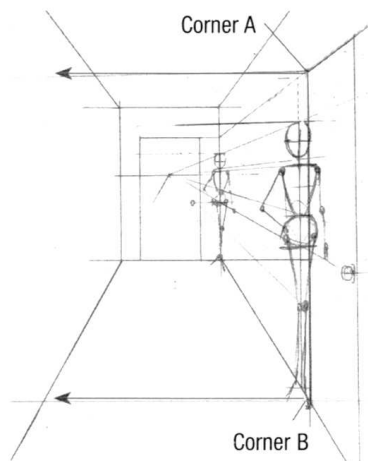


③ Draw the characters.

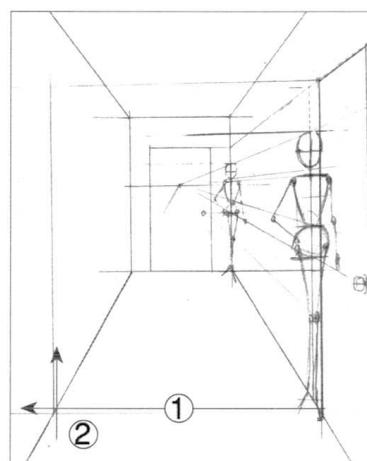


Now there are two characters of virtually identical heights.

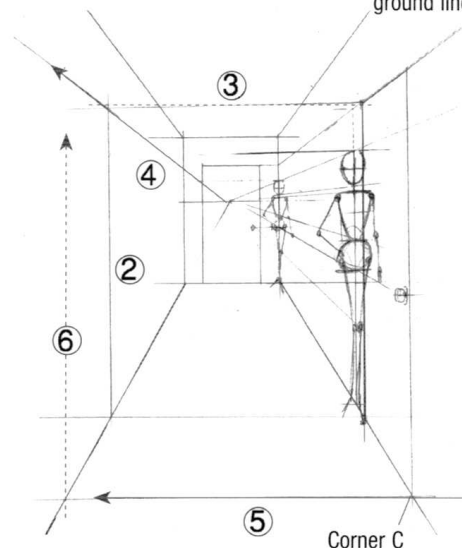
Drawing a Door on the Opposite Wall



Draw horizontal lines from Corners A and B.

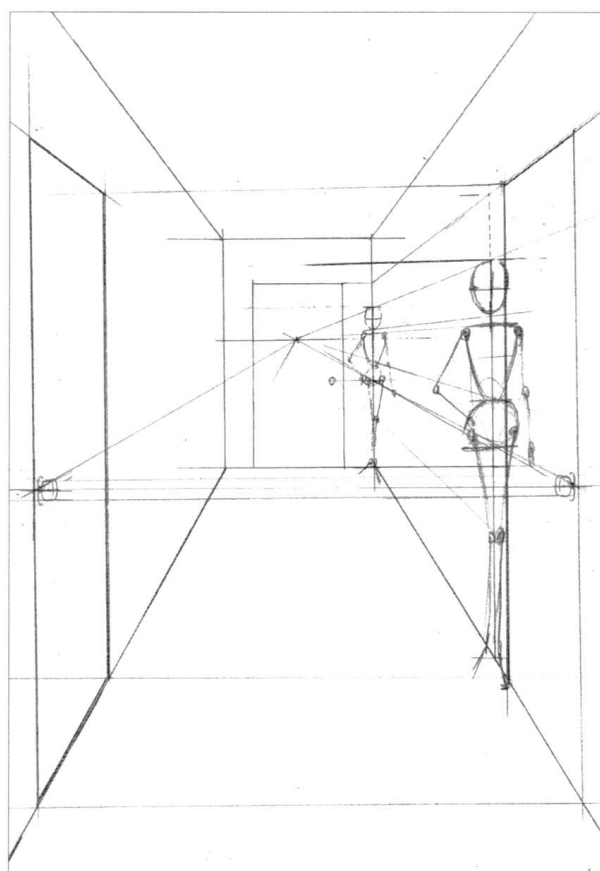


② Draw a vertical line from the point where Line ① intersects with the ground line.



④ Diagonal line ④ connects the intersection of Lines ② and ③ to the vanishing point. It is the door line of the door on the opposite wall.

Next, draw horizontal Line ⑤ from Corner C and then draw vertical Line ⑥. The door on the opposite wall is now finished.

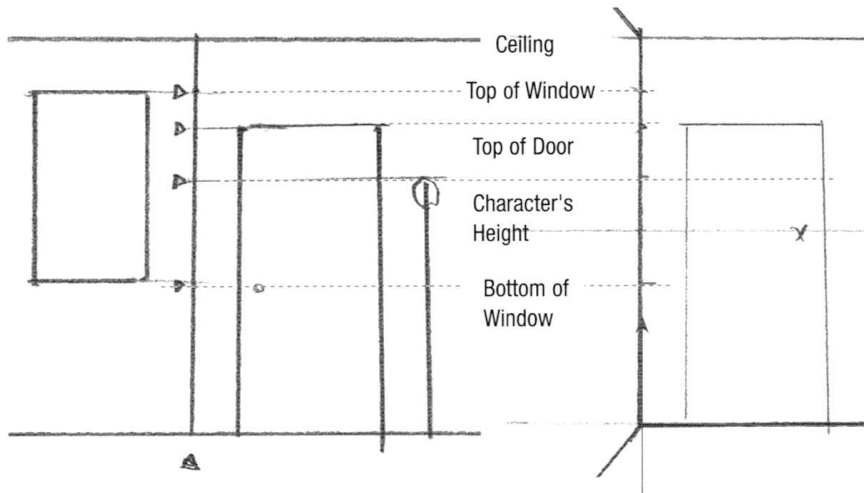


When drawing knobs, again transfer the width and center laterally around the space.



● Sketching the Components of a Corridor

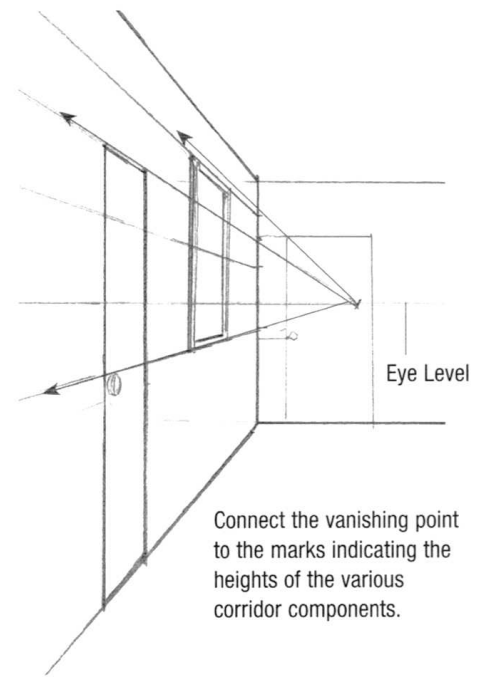
All That Needs to Be Done Is to Establish the Heights of the Characters, the Doors, the Ceiling, and the Windows



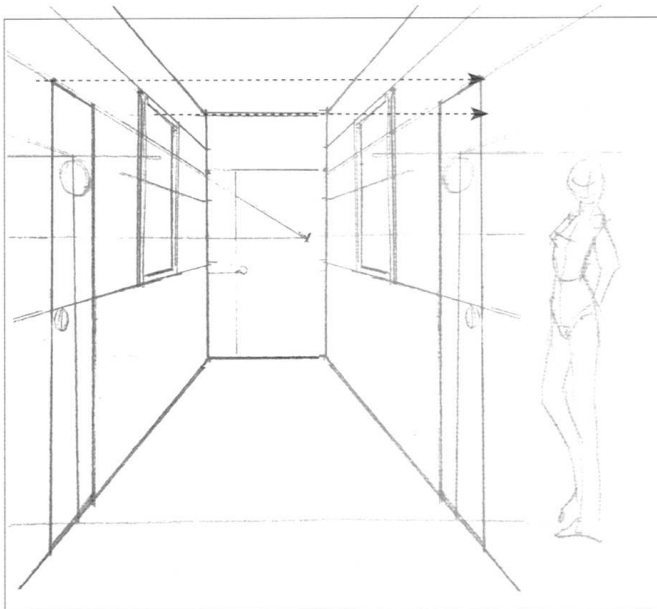
Sketch the doors, windows, and ceiling using simplified, abstract forms. Use the character's height as a yardstick to determine the scale of the other components.

Jot down a mark indicating the position of each corridor component.

Typically, artists will transfer an object that matches the character's height. All that needs to be drawn here is a mock-up figure and lateral lines from one location to another.



Connect the vanishing point to the marks indicating the heights of the various corridor components.



These techniques let you successfully distribute the basic corridor's basic components: the windows, doors, etc. around the space.

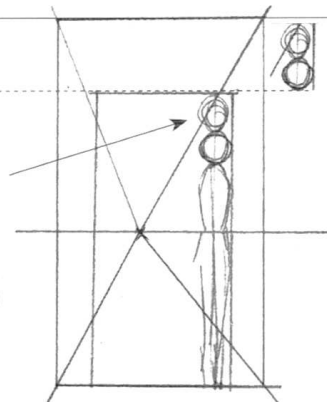
Once you have established the positions of objects along one wall, transfer those objects laterally to the opposite wall.



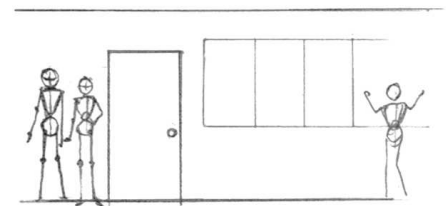
Using the Character to Establish the Scale of the Doors and Windows

Easy Technique for Setting the Doors' and Ceiling's Heights

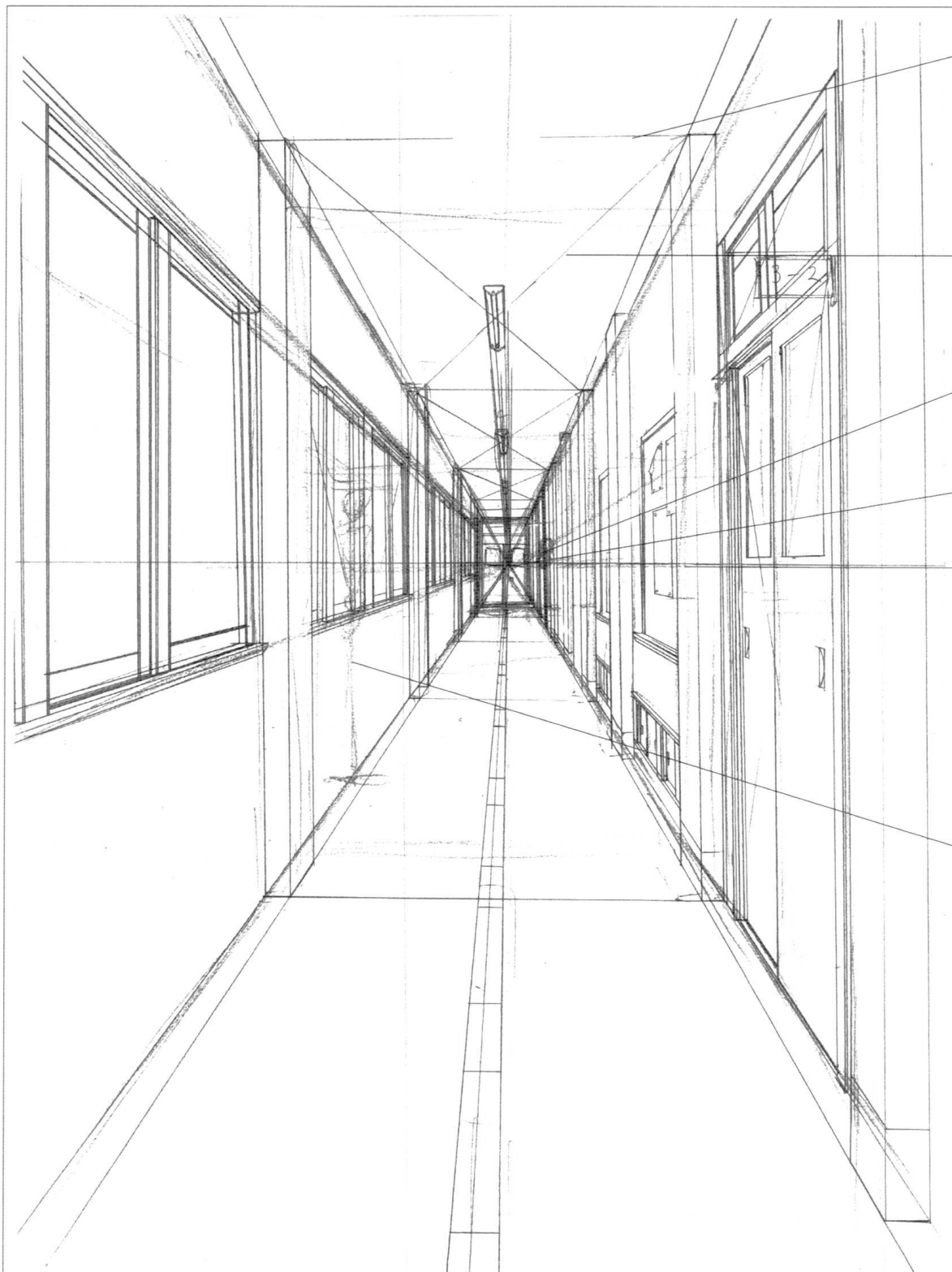
Sketch a mock-up figure and then draw the top of the door one head-length above the mock-up figure's head. This establishes h is.



The ceiling is an additional two head-lengths above the door.



Make full use of your daily experience and memories to establish the sizes and heights of objects. You might think to yourself, "How high was the window when I stood next to it?" when posing the mock-up figure, recalling the position of a window's bottom frame as you draw.



This line serves as a guide when transferring the projecting masonry support to the opposite wall.

These X's function as guides when adding florescent lighting to the ceiling.

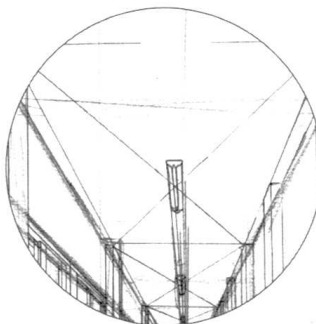
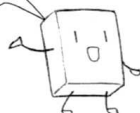
This is a mock-up figure drawn next to a door.

Vanishing Point

Horizon Line

This is a second mock-up figure used here to determine how high to draw the window.

We've just about completed our discussion of how to transfer objects around a room so that they match the characters in scale. The techniques discussed are critical to drawing in perspective.

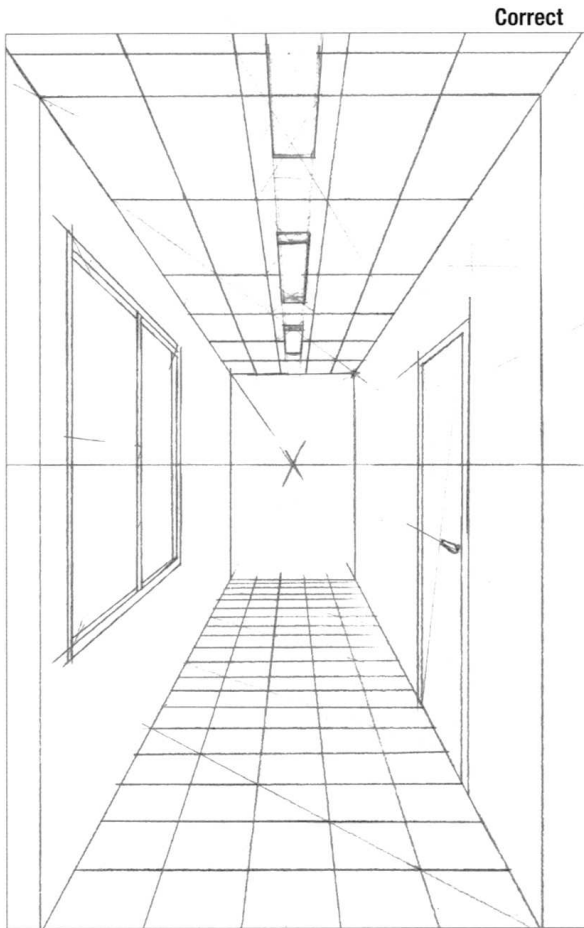


Next, we'll talk about using the X's shown in the corridor above.

Drawing Corridor Components Successfully

Learning the "X Method" through Drawing Windows

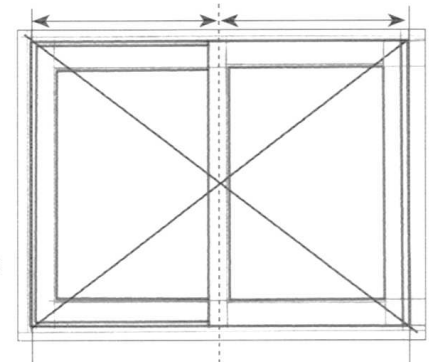
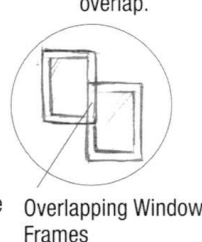
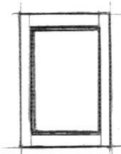
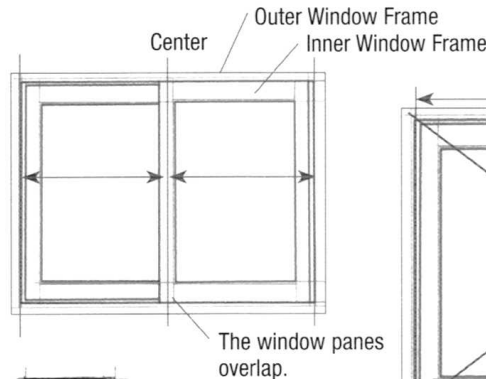
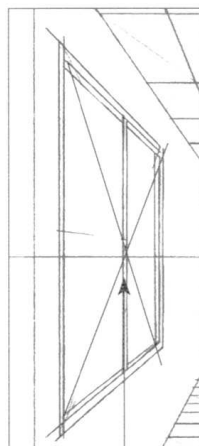
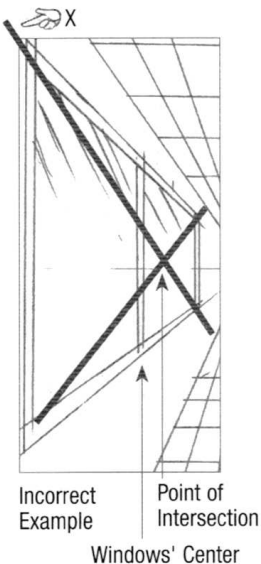
This section discusses three drawing methods used to create the illusion of depth effectively. This is a simple drawing technique where diagonal lines are used to connect corners; however, it is a basic technique that may be applied to a wide range of practical uses involving rectangles.



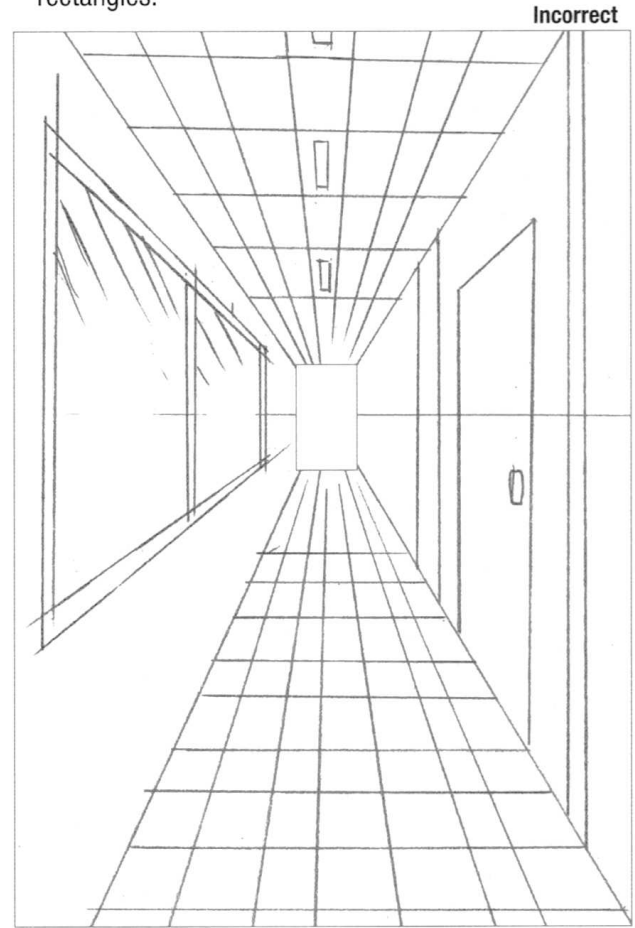
Correct Example

- The window panes have natural proportions. The closer window pane is larger, while the far pane is narrower.
- The floor and ceiling tiles also become smaller as the eye moves toward the back of the corridor. This evokes a sense of depth.

● Comparison: Let's try drawing diagonal lines to connect the corners.



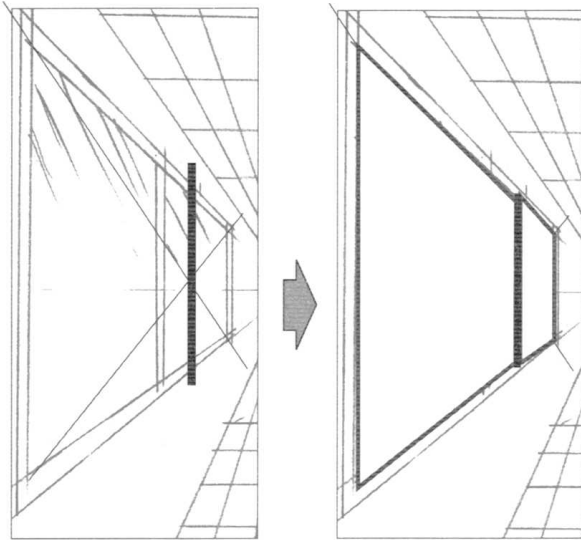
The above shows how the window appears from the front. Diagonal lines drawn through the window's interior to connect the corners intersect at the center of the two panes.



Incorrect Example

- The window lacks natural proportions. The far window pane appears too wide.
- The ceiling and floor tiles are randomly sized and fail to create the feeling of depth.

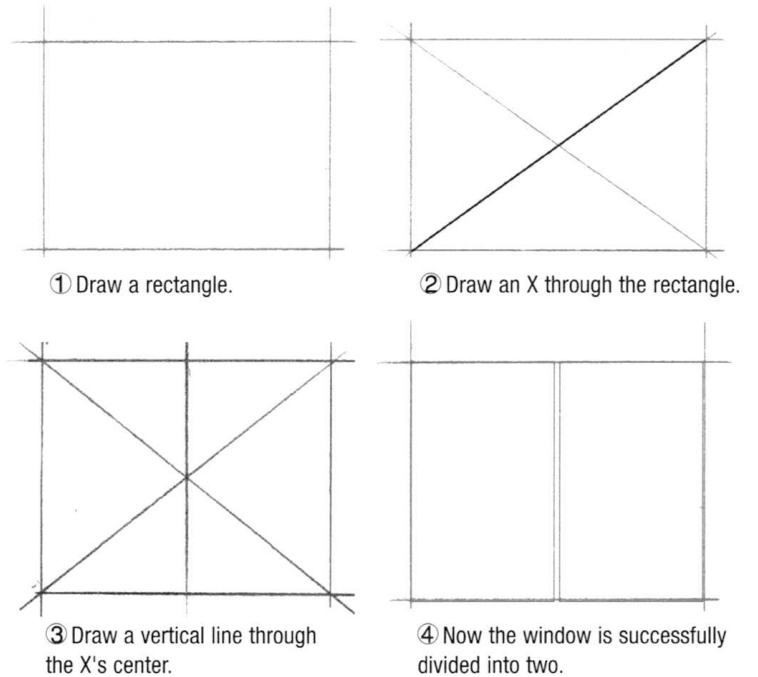
● Correcting Mistakes



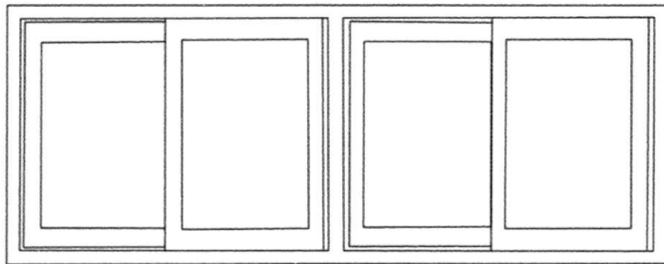
Drawing a vertical line at the X's center, where the two diagonals intersect corrects the mistake.

Now, the window has a natural sense of depth.

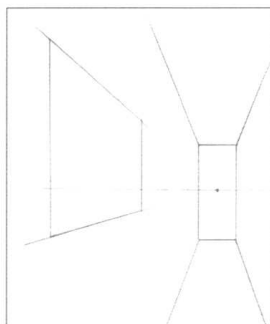
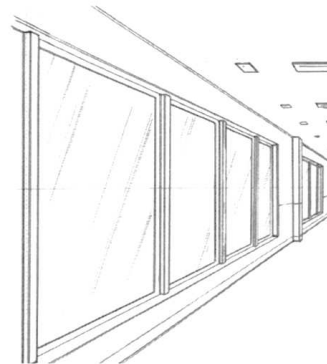
The point where transverse diagonal lines intersect on a rectangle lies at that rectangle's exact center. It is a precise method for bisecting a rectangle. For this book, we will call it the "X method."



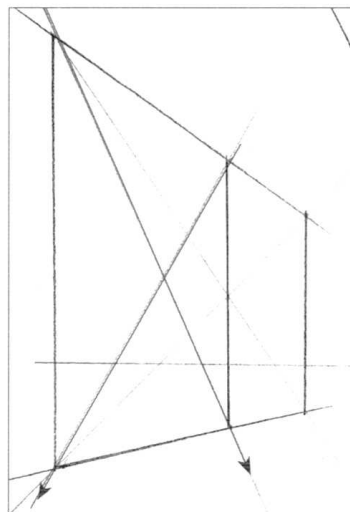
● Drawing a Four-Pane Window



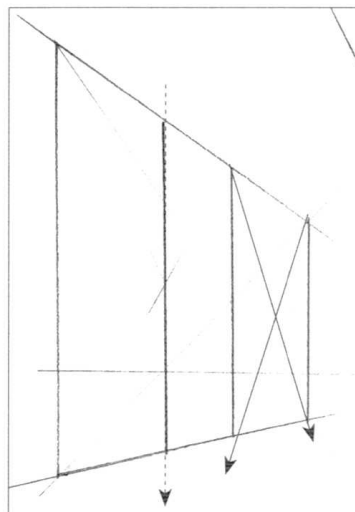
E.g.: A Four-Pane Window Drawn in Perspective



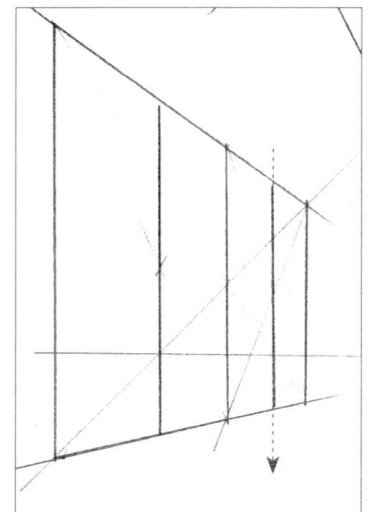
This shows a simplified corridor. The position of the window and its shape has been sketched in roughly.



① After dividing the window in two, draw an X through the front half.

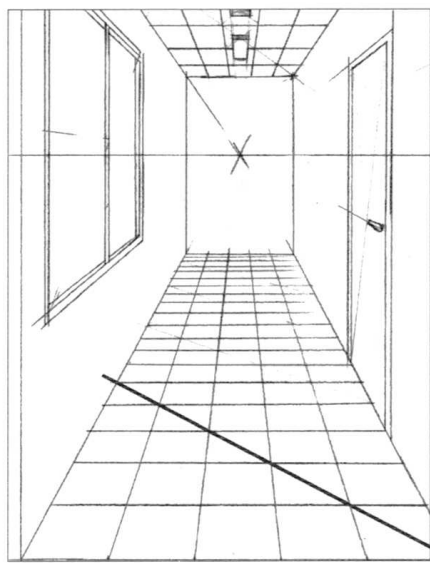


② The front half is now divided into two. Likewise, draw an X through the far half.

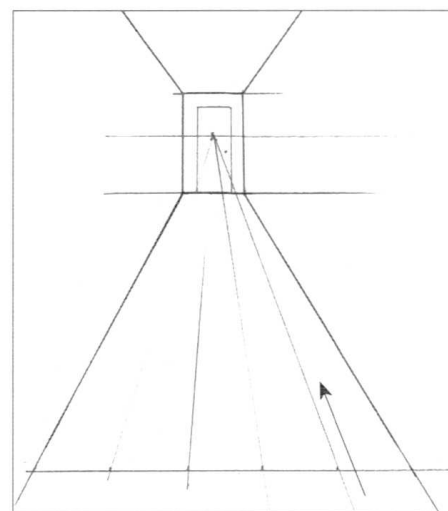
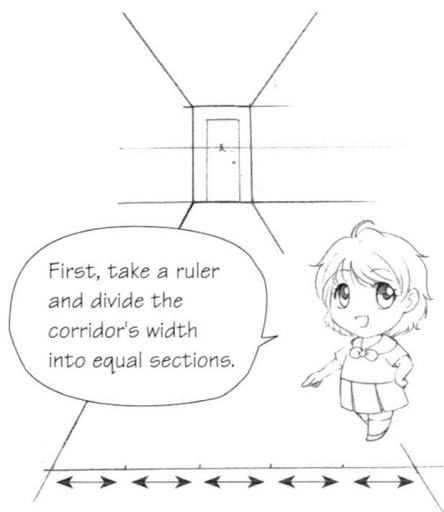


③ You have now drawn a window with four panes in perspective.

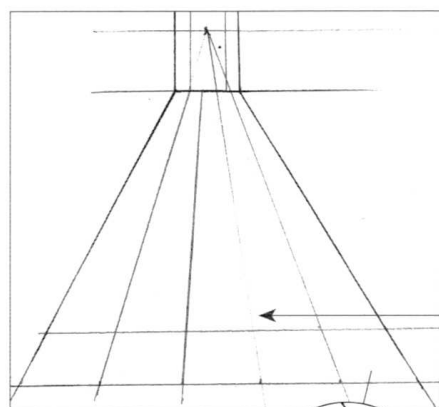
Learning the "Transverse Line Method" through Drawing Floor Tiles



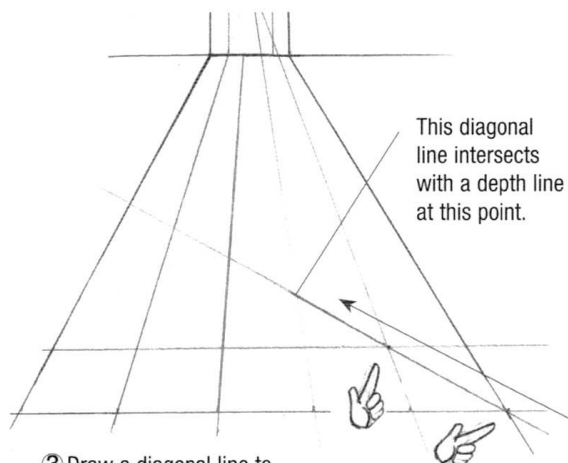
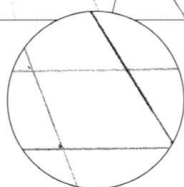
The "Transverse Line Method"



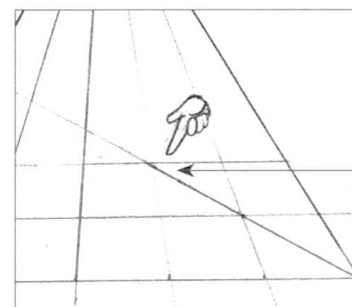
① Draw diagonal lines toward the vanishing point.



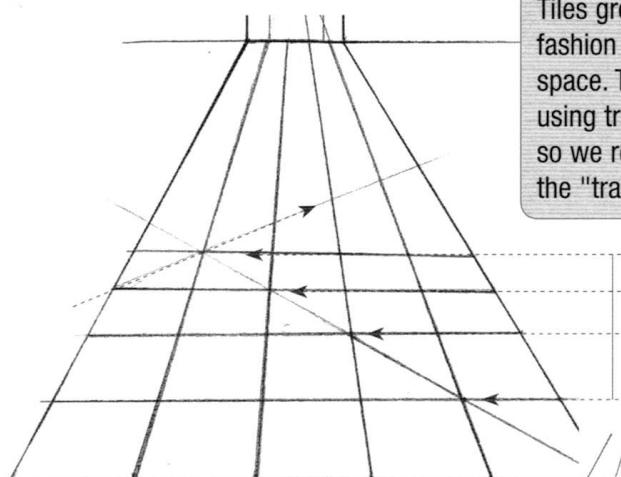
② Draw horizontal lines. Use the tiles' original form (i.e. depth and width) as the basis for the rest.



③ Draw a diagonal line to connect the corners.

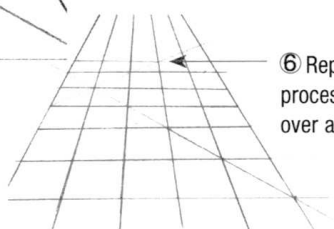


④ Draw a horizontal line through where the diagonal line intersects with the depth line.



⑤ Once you have reached the last tile, change directions and draw a new diagonal line.

Tiles grow smaller in a regular fashion as the eye travels back in space. This technique involves using transverse diagonal lines, so we refer to it in this book as the "transverse line method."

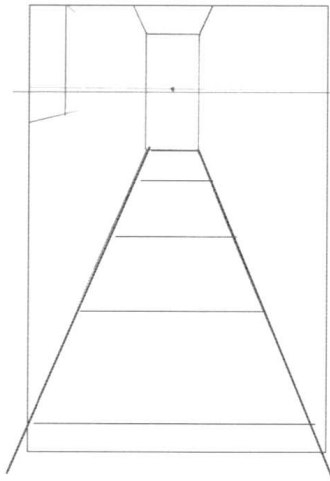


⑥ Repeat this process over and over again.

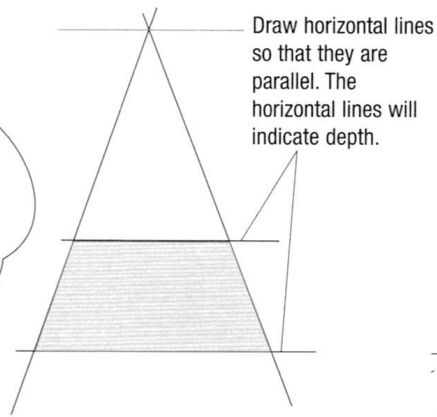


It takes patience to do this, but you get beautifully drawn floor tiles as a result.

The "N Method"

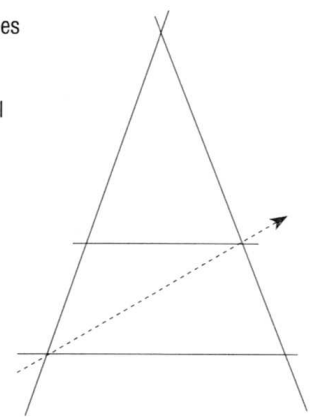
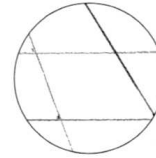


This is a handy method to use when drawing in perspective simple objects that gradually become smaller at intervals.

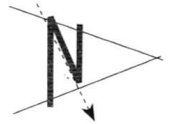


Draw horizontal lines so that they are parallel. The horizontal lines will indicate depth.

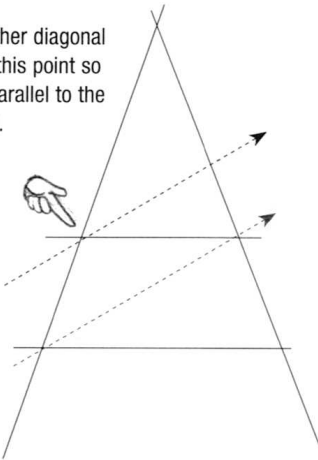
① Indicate how far back the first section will be. As when drawing tiles, this serves as the basis for scaling the remaining corridor floor sections.



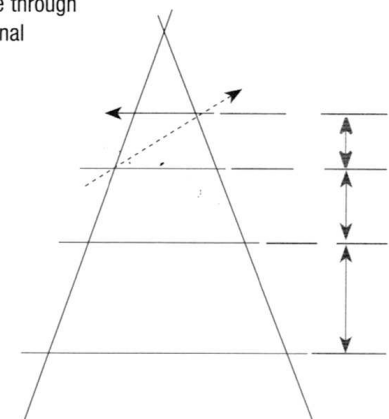
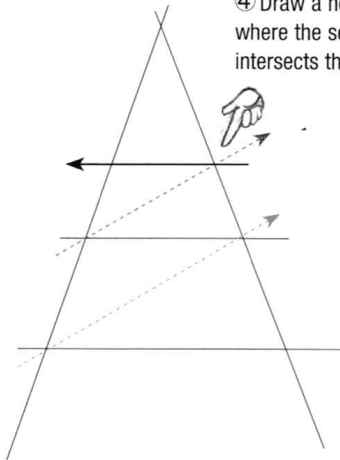
② Draw a transverse diagonal line through the corners. The resulting lines form an "N", so we will call this method "the N method."



③ Draw another diagonal line through this point so that it runs parallel to the first diagonal.

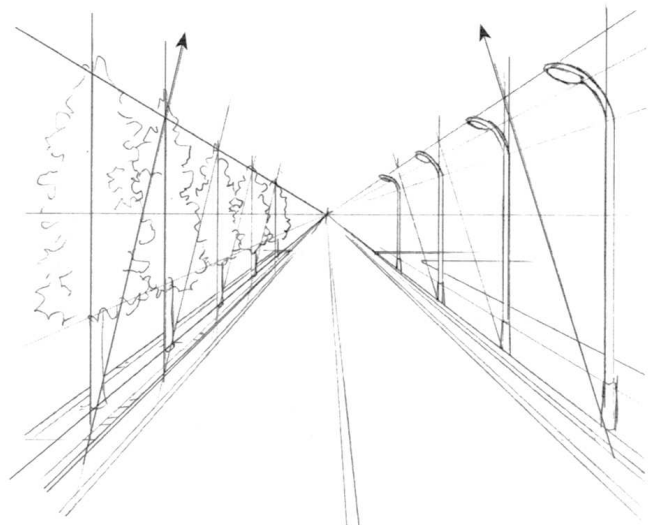
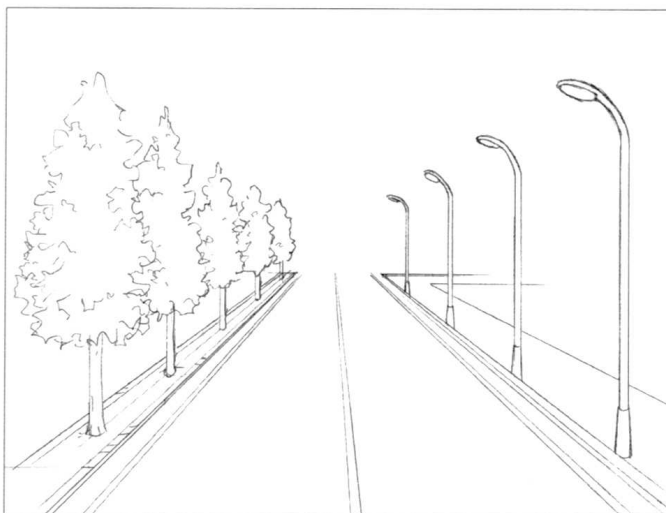


④ Draw a horizontal line through where the second diagonal intersects the side line.



⑤ Simply repeating this process allows you easily to draw horizontal lines moving gradually into the distance.

● Examples of Practical Application



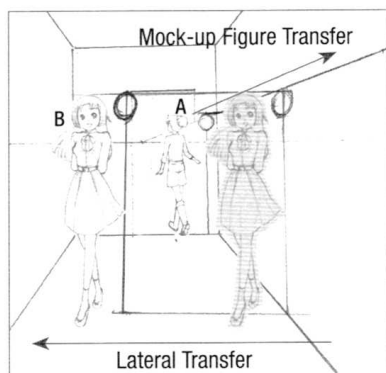
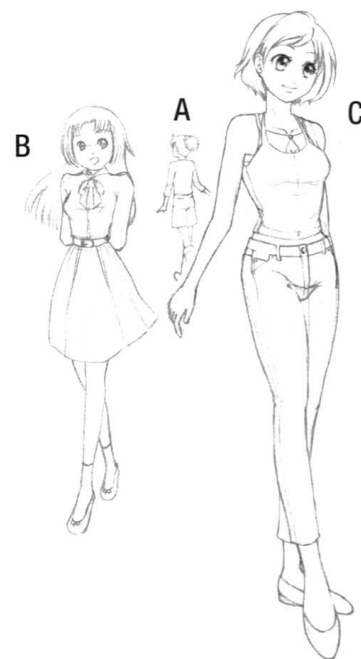
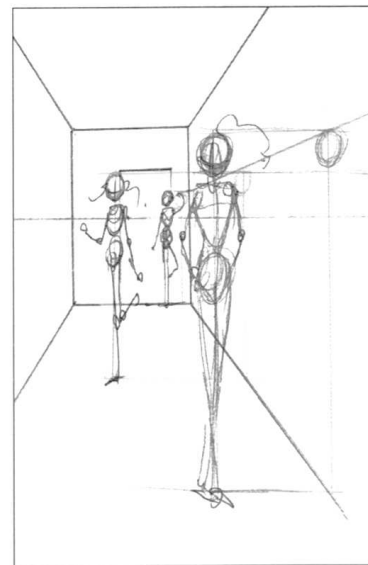
Shown here are basic lines of perspective, the distance between the first two trees, and the diagonal lines forming the "N".

Drawing Characters in a Corridor

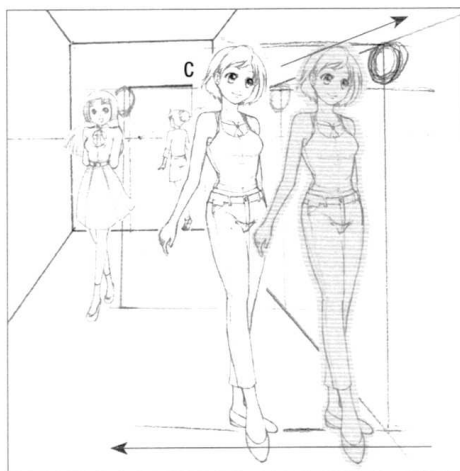
Transferring Mock-up Figures and Transferring Objects Laterally

● Basic Method: Drawing Full Figures

Typically, you would draw the characters before the setting. However, artists occasionally find themselves adding characters to a previously drawn setting. This section discusses various methods for adding characters to a setting.



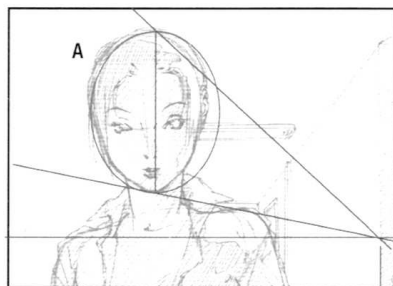
Transfer Mock-up Figure A to the location of Mock-up Figure B to establish B's height. Transfer Mock-up Figure B laterally to set B's position.



Extend the height lines for the mock-up figures even further to establish the height of Mock-up Figure C. Transfer C laterally to set C's position.

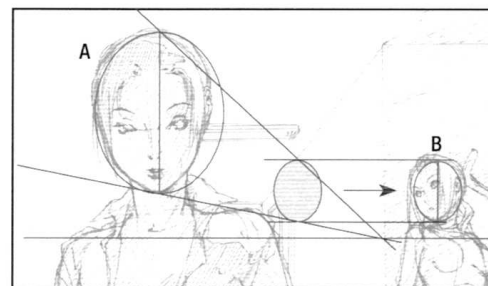
● Practical Application: Using Mock-up Figure Heads to Position Characters

This technique is effective when you cannot draw the character's full figure.

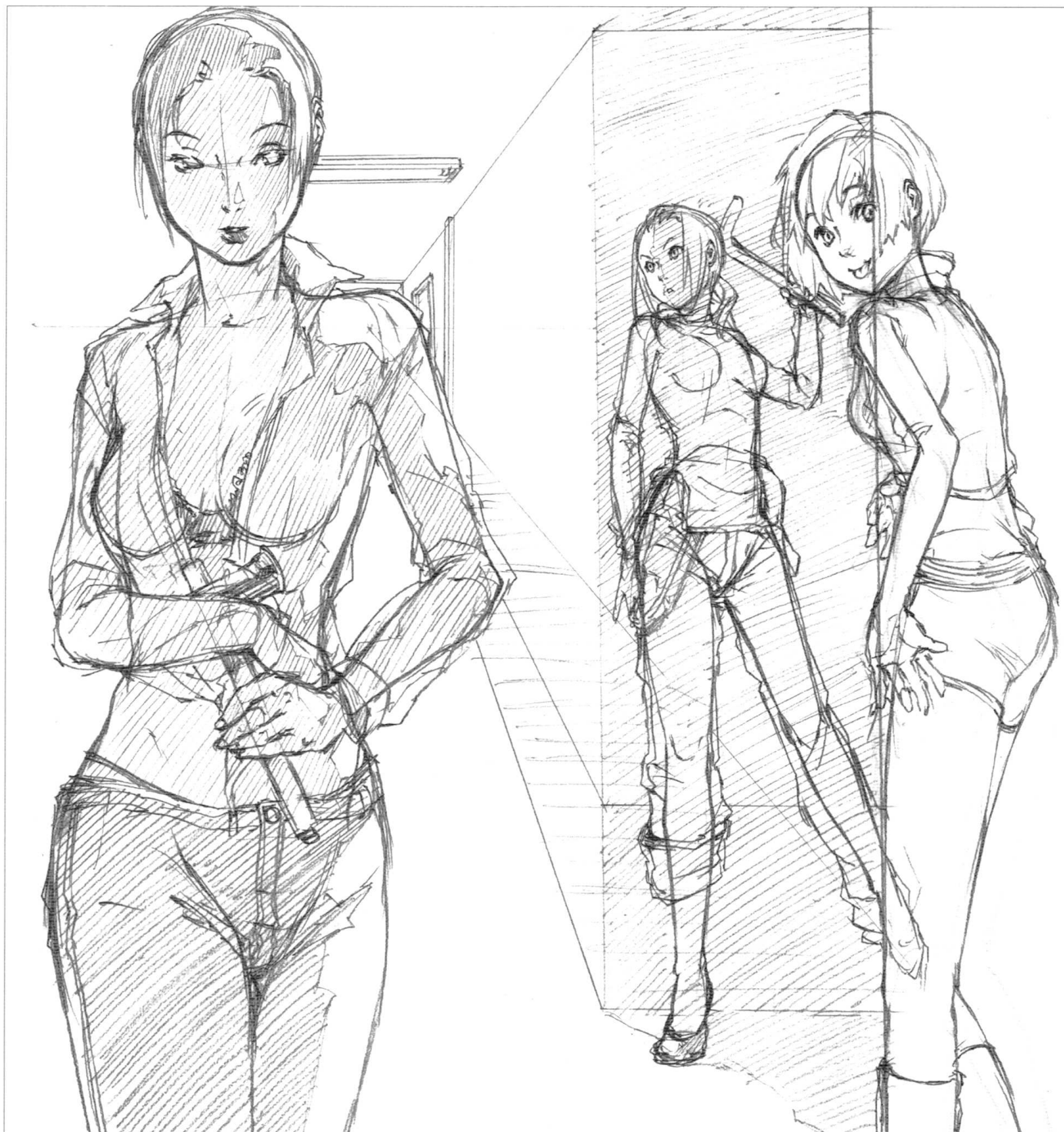


When the setting's vanishing point does not offer a clear guide to a character's height, designate a new vanishing point, and connect it to the head of the first figure (Figure A above).

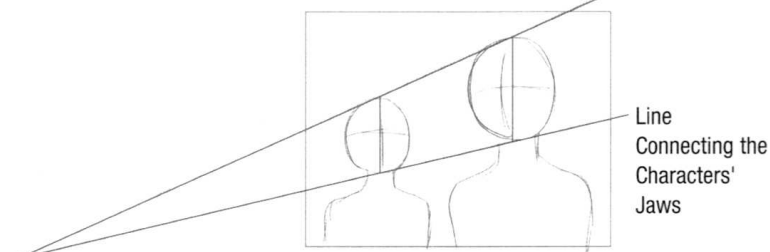
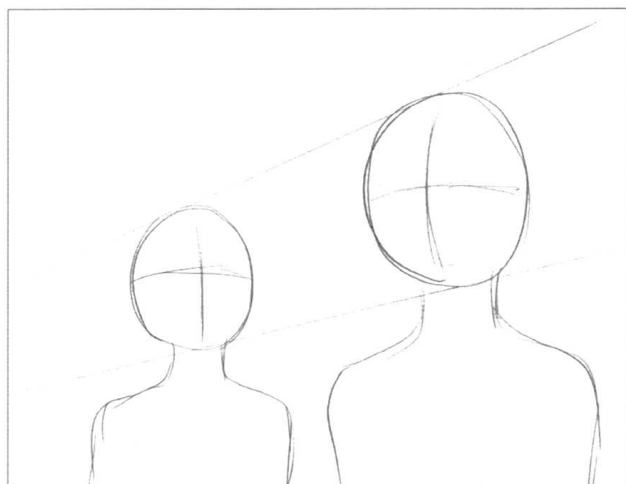
Vanishing Point



Transfer a mock-up of the character's head to the desired position. This serves as a guide for the second character's head (Character B). Draw Character B's body from the head.

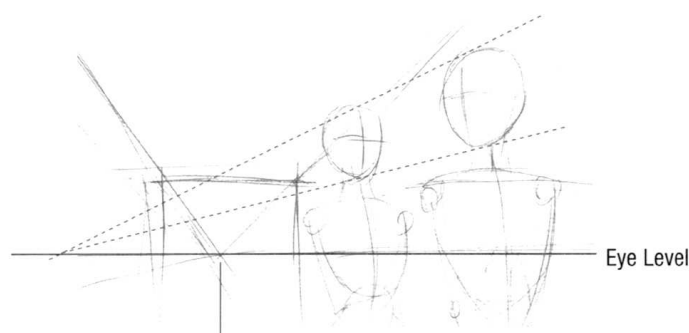


● Finding a Vanishing Point for Drawing the Characters

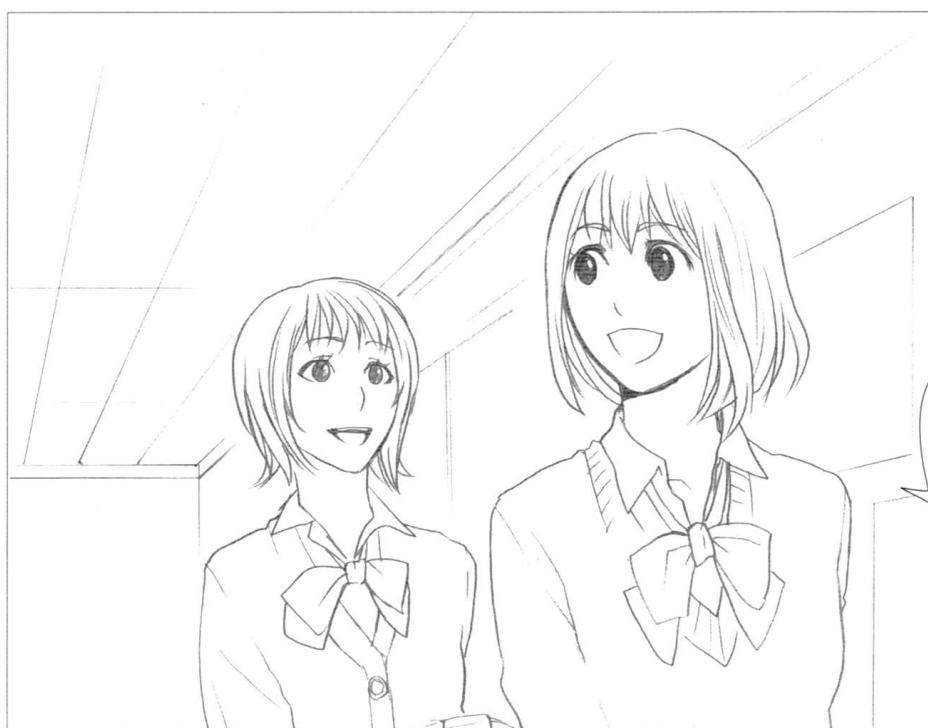
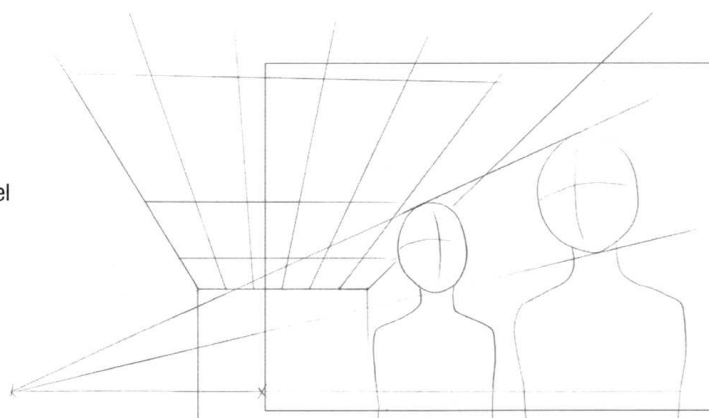


① Use diagonal lines to connect the tops of the characters' heads and their chins.

② The vanishing point lies where the two lines intersect. This determines how high eye level (the horizon line) lies.

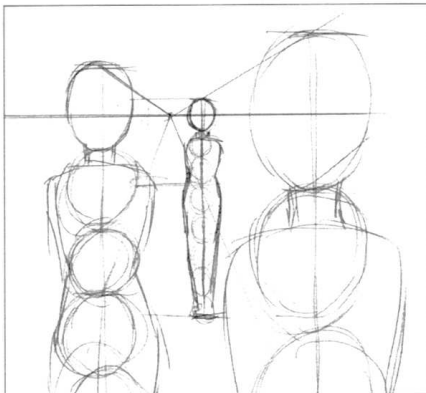


③ Once you have established the horizon line, roughly sketch the setting and add the vanishing point.

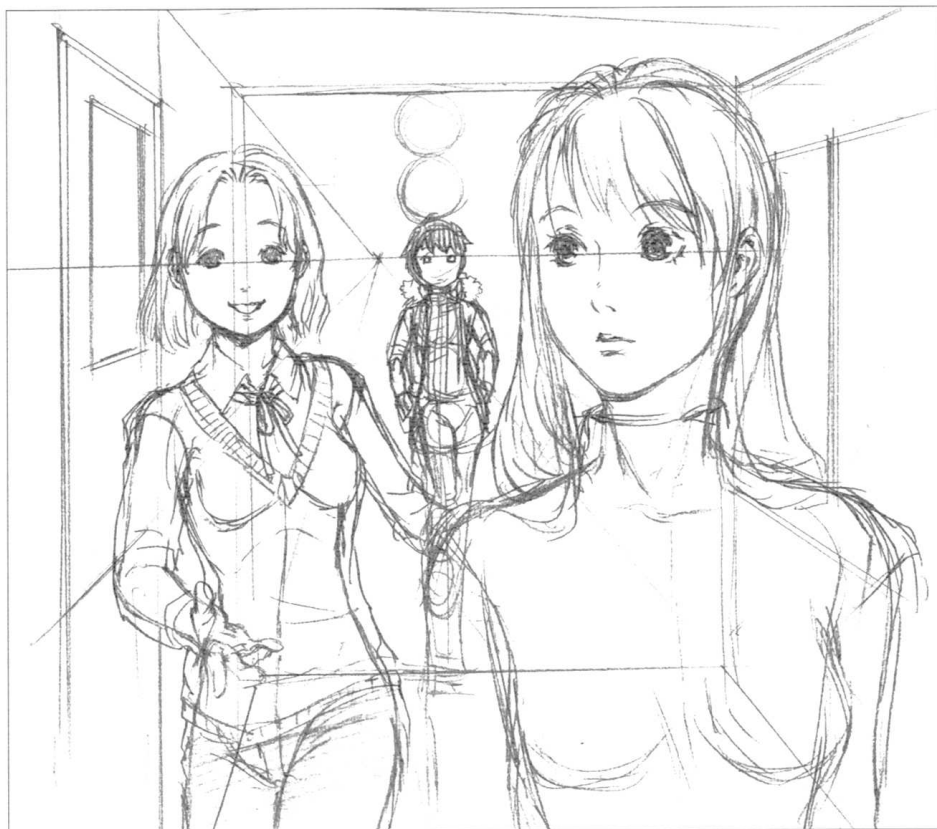


This method assumes that both characters have the same height. Manga artists typically use this method.

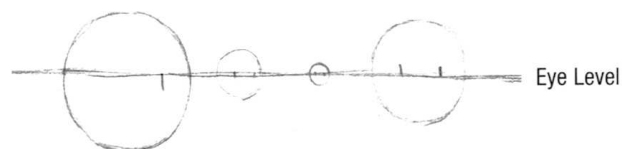
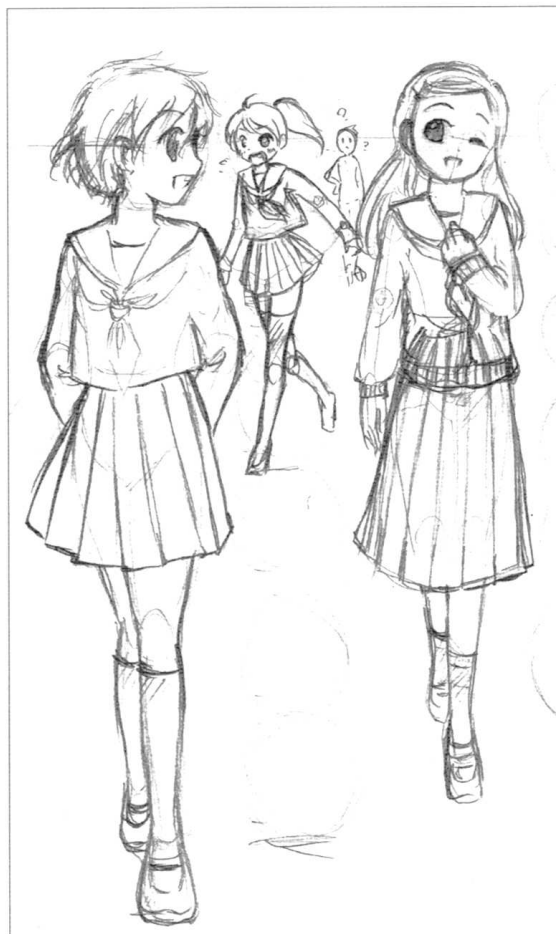
● Matching up the Characters' Eyes at Eye Level



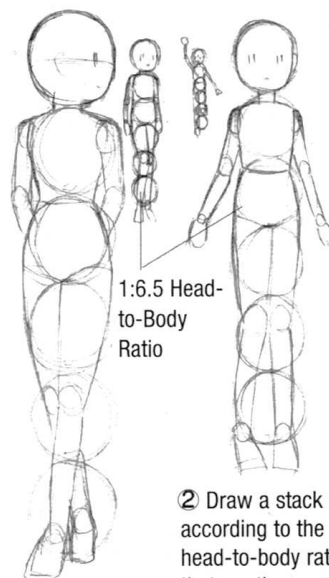
All of the characters' eyes should lie at eye level (i.e. fall along the horizon line). Modifying the size of the characters' heads results in a large or small character. This allows you to generate a sense of depth easily.



The Same Techniques for Matching up Characters' Eyes at Eye Level Applies to Full Figures

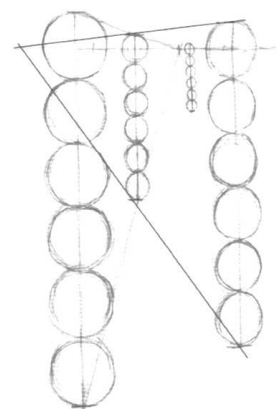


① Sketch the characters' heads at eye level as if they were beads thread along a string.



1:6 Head-to-Body Ratio

② Draw a stack of circles according to the character's head-to-body ratio. Use circles that are the same size as the figure's head to determine the figure's full height.

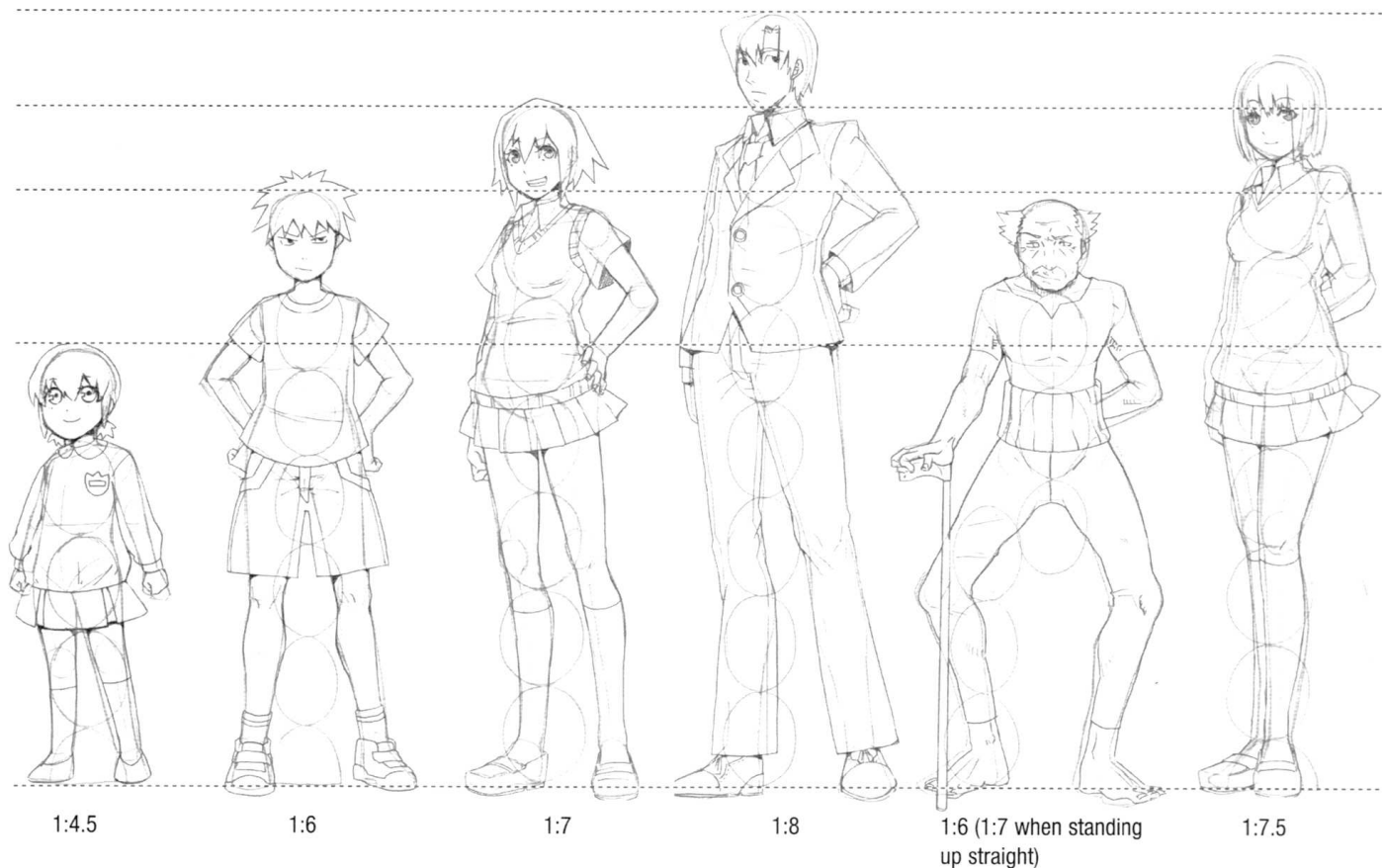


③ Use diagonal lines to connect the characters' feet and heads. Where these two lines intersect becomes the vanishing point.

Differentiating Characters' Heights

● Designing Characters to Appear Young or Old, Male or Female

Differences in height become apparent looking at only half the character's head-to-body ratio.



Approximate Height Equivalents for Drawing Characters

*Approx. Size of the Average Head: 20 cm to 24 cm (Approx. 7 7/8" to 9 15/16")

1:4.5 Head-to-Body Ratio—90 cm to 100 cm (Approx. 35 1/2" to 39 3/8")

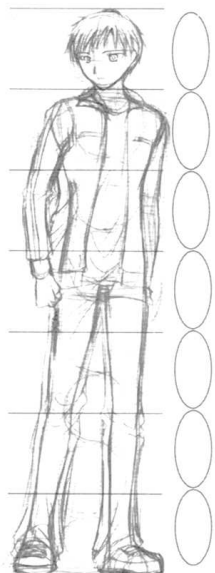
1:6 Head-to-Body Ratio—120 cm to 150 cm (Approx. 3' 9 1/4" to 4' 9 1/16")

1:8 Head-to-Body Ratio—160 cm to 180 cm and up (Approx. 5' 3" to 5' 8 7/8" and up)

Considering the Head-to-Body Ratio When Sketching

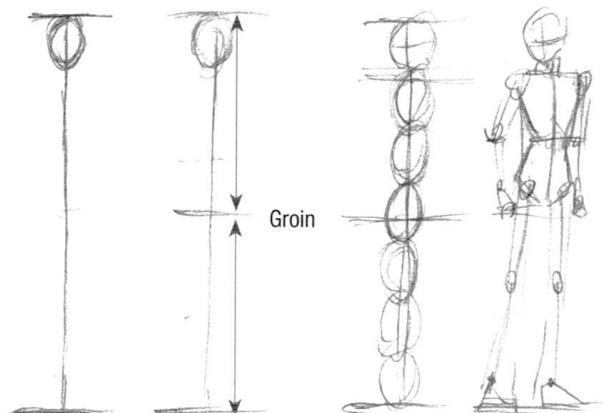


Character with a 1:3 Head-to-Body Ratio



Character with a 1:7 Head-to-Body Ratio

Think about figure proportioning (i.e. the overall proportioning, whether the torso or legs should be longer, etc.) when drawing your characters.

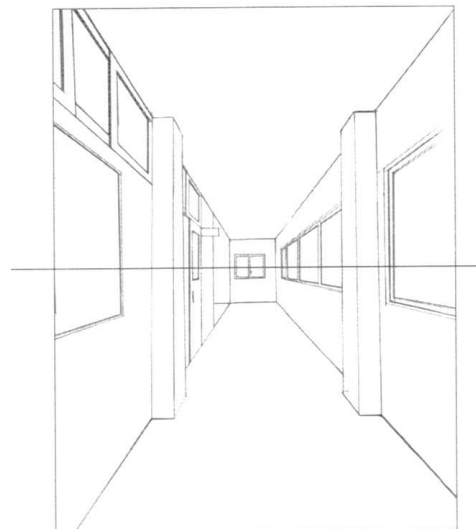


Typically, the groin is drawn halfway along the figure's full height (in the case of a stick figure, halfway along the stick).

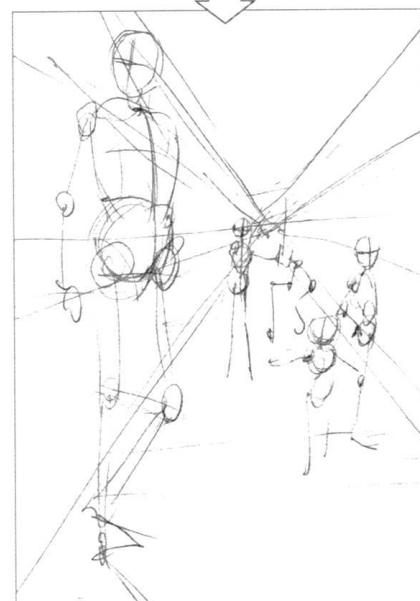
The groin falls along one of the head-lengths composing the figure's full height, thereby establishing the figure's proportioning.



Final Composition: This section explains how to draw the characters so that they appear to have different heights, while maintaining a sense of depth.



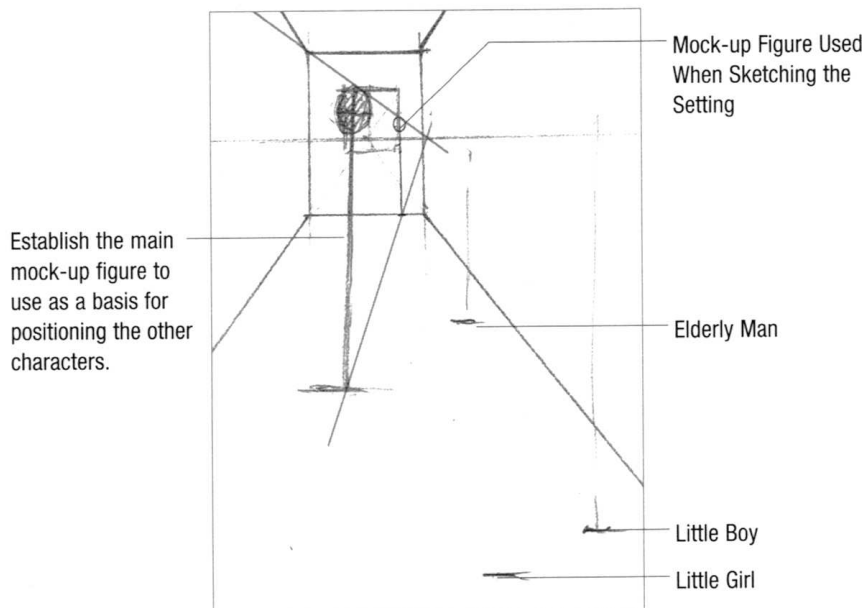
Setting: Establish the characters' eye level.



Produce a rough sketch of the characters distributed throughout the setting.

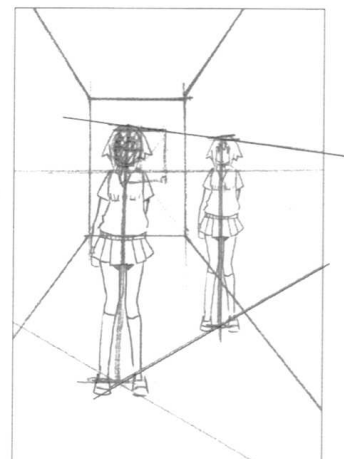
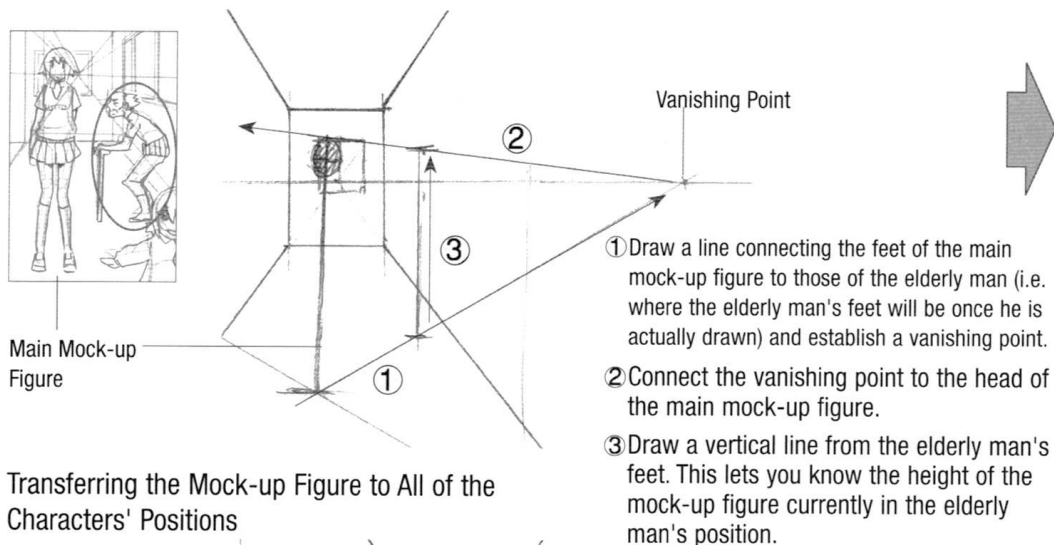
● Positioning Characters

1. Establish One Character as the Main Mock-up Figure and the Desired Positions of the Other Characters' Feet



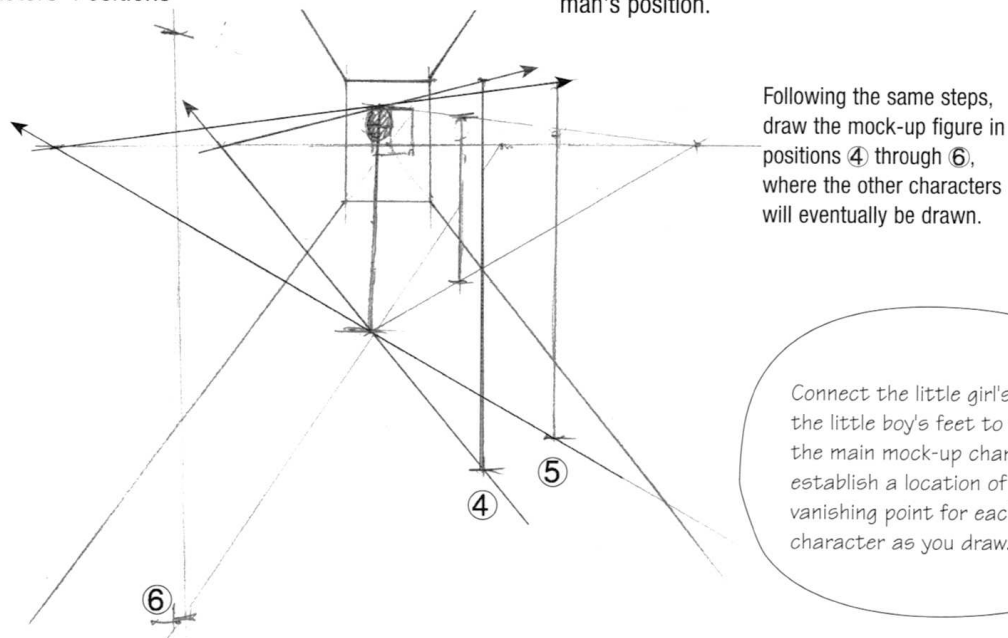
2. Transferring the Main Mock-up Figure to the Other Characters' Positions

Drawing the Main Mock-up Figure in the Elderly Man's Position

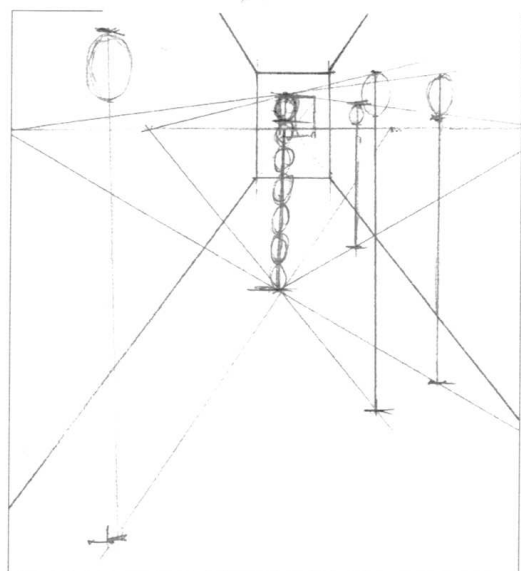


The above shows the mock-up figure standing in the elderly man's place.

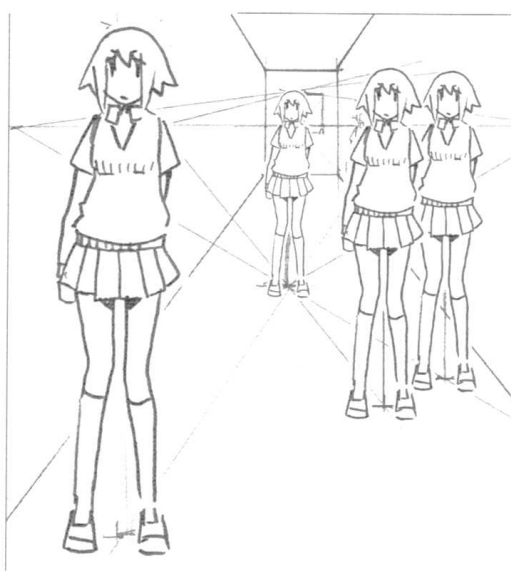
Transferring the Mock-up Figure to All of the Characters' Positions



Connect the little girl's feet and the little boy's feet to that of the main mock-up character and establish a location of a vanishing point for each character as you draw.



The above shows a mock-up figure positioned where each of the characters will stand.

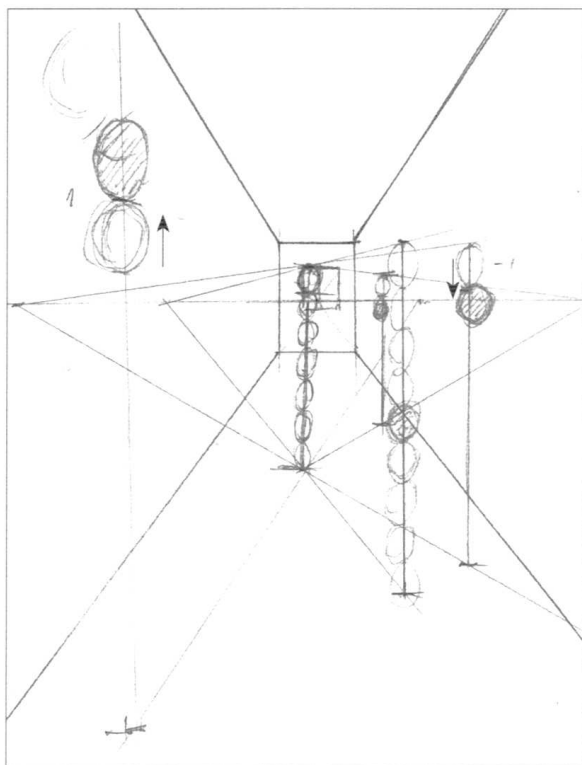


This shows basically what you have drawn up to this point, with the main character in each of the other characters' positions in lieu of the mock-up figures that represent her.

From this point on, you will make the figures either shorter or taller as appropriate, and draw each character the way he or she should look.



3. Using Head-Lengths to Adjust the Height of Each Character



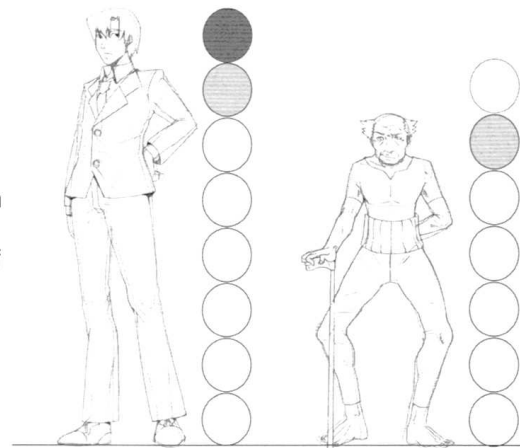
1:7 Head-to-Body Ratio

1:4.5 Head-to-Body Ratio

1:6 Head-to-Body Ratio

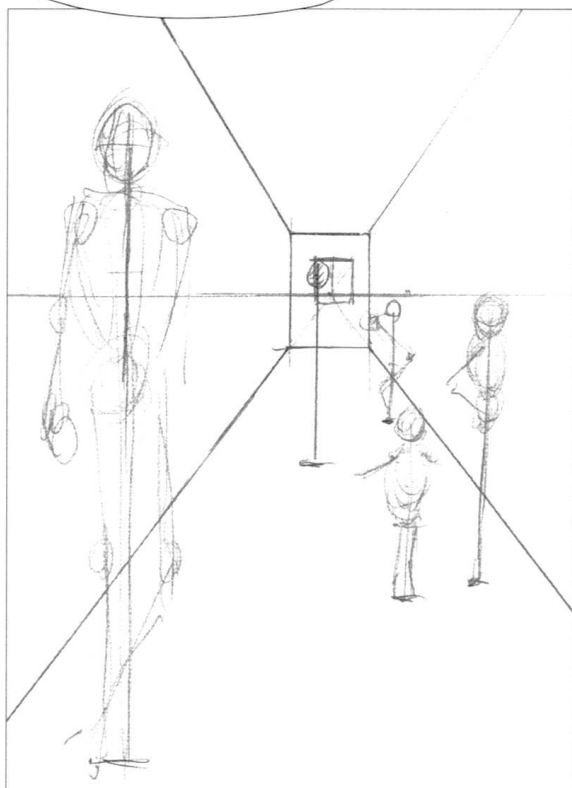
The young man is one head-length taller than the main character.
The elderly man and the little boy are each one head-length shorter.
The little girl is two and a half head-lengths shorter.

As you have just seen, the way to differentiate the characters' heights is to establish one character to use as the main character, transfer a mock-up figure of the main character into the positions of the others, and then to adjust the figures' heights according to each character's head-to-body ratio.

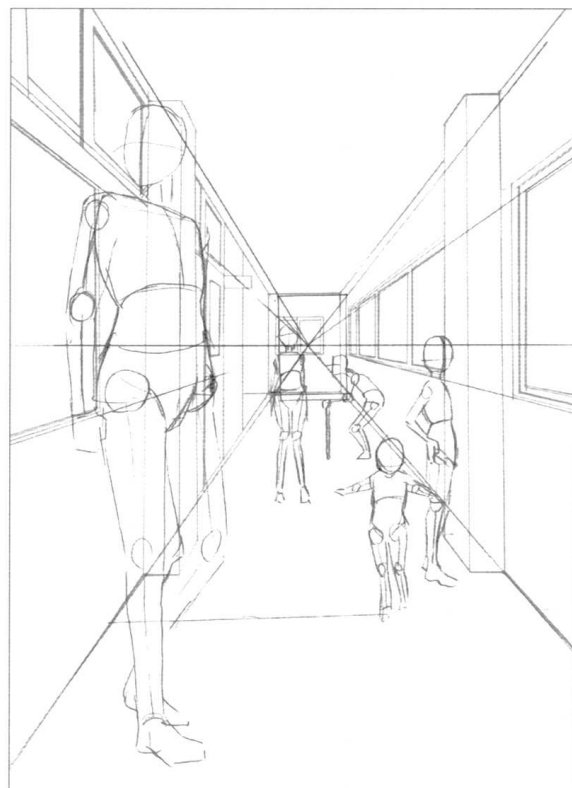


1:8 Head-to-Body Ratio

1:6 Head-to-Body Ratio

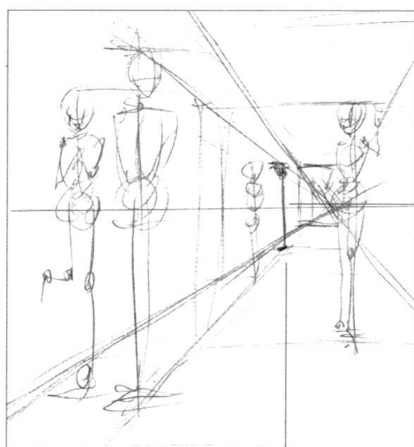


Draw the characters according to the appropriate height guides. Take care not to alter the positions of each character's feet.



This process remains the same, regardless if you add the characters as you draw the setting or if you draw the setting first and then add the characters.

● Height Differences amongst Couples



Rough Sketch

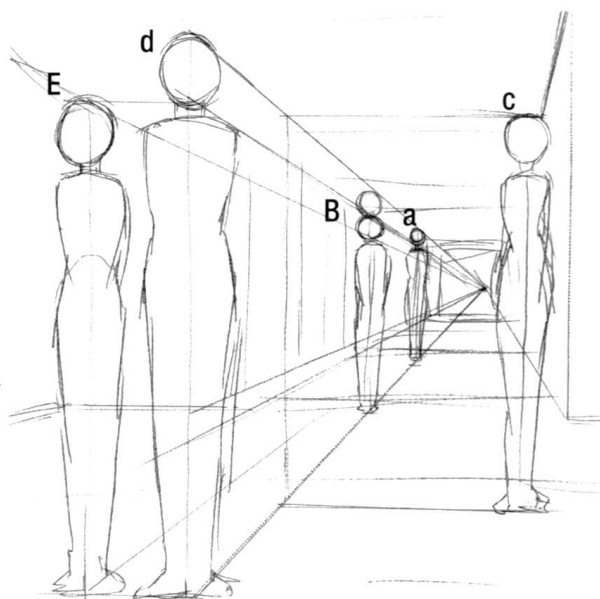


Main Mock-up Figure (B)

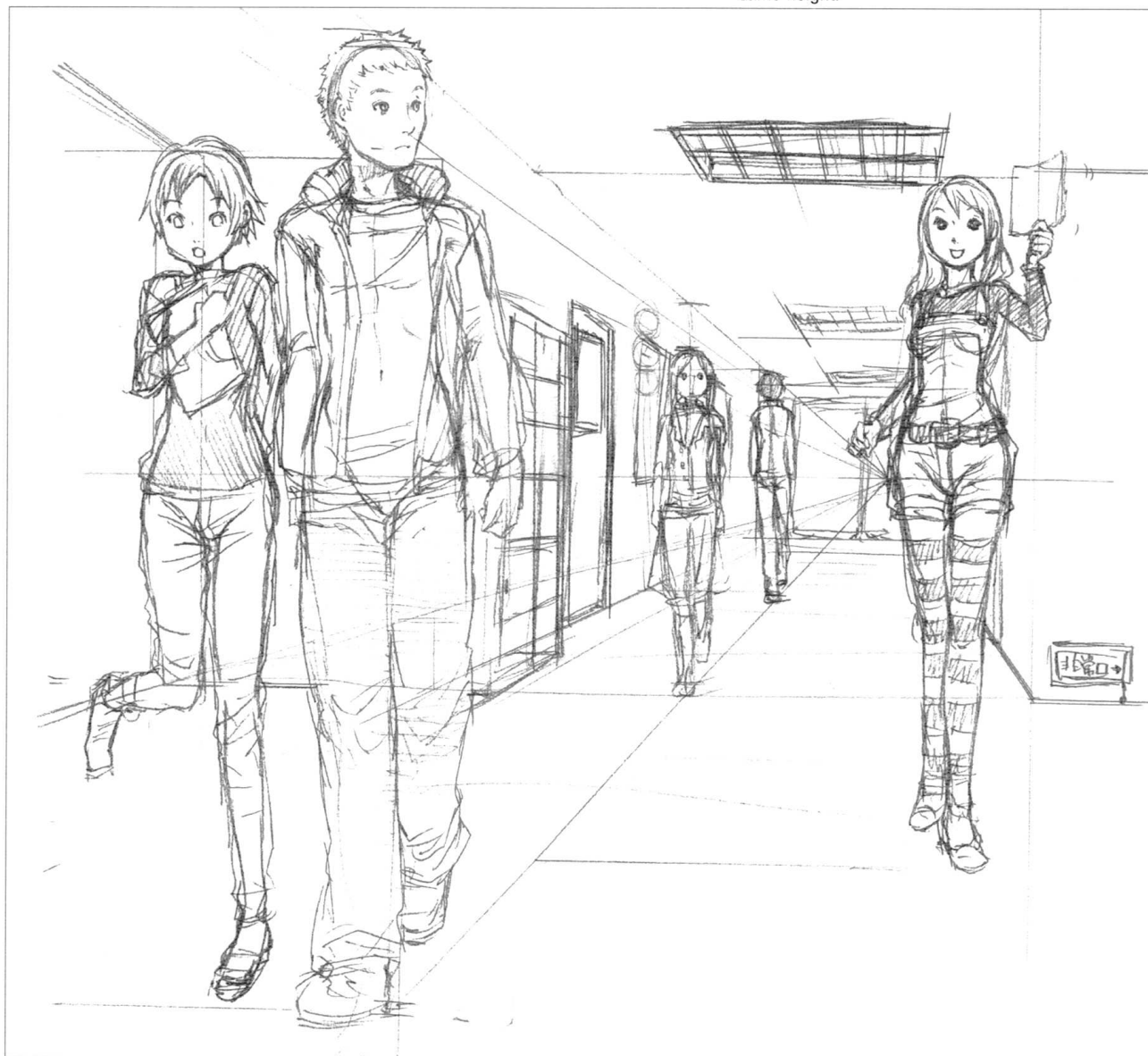
Add one more head-length to the height of Main Mock-up Figure (B).

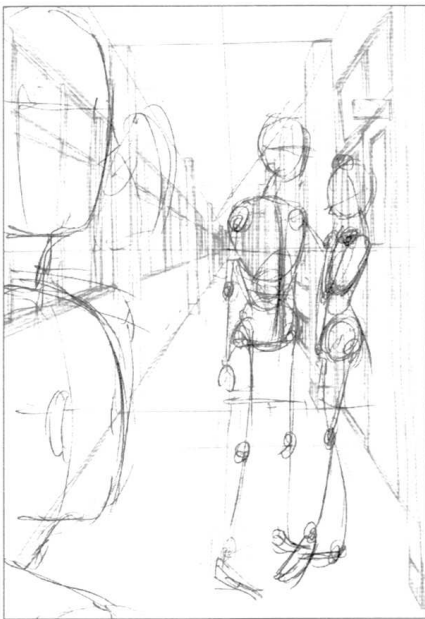
This represents the boy, who is also the taller of the two.

This represents the height of the main character, who is used as the basis for drawing the other characters.

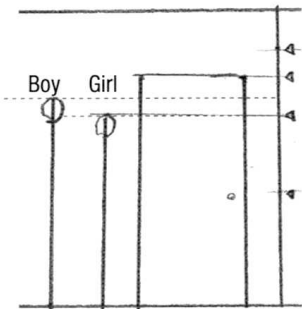


After drawing lines for establishing the main mock-up figure's height and transferring the main mock-up figure around the space, we recognize that Figures B and E have the same height. Figures a, c, and d are all tall figures and have the same height.





Rough Sketch



Establish gender differences (i.e. height differences) for each character when determining the components of corridor and room interiors.

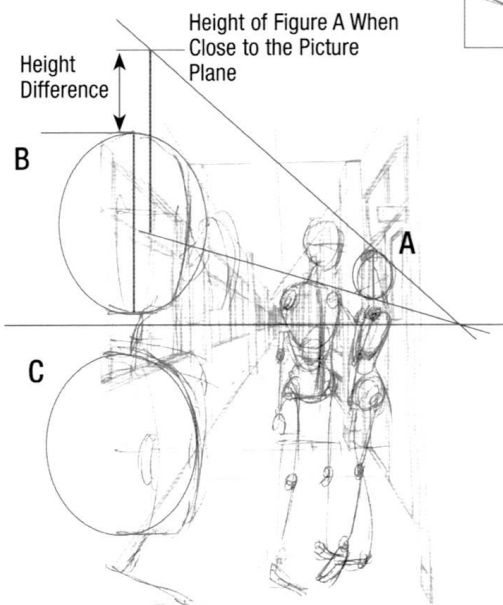


Figure C is either short in stature or bending forward.

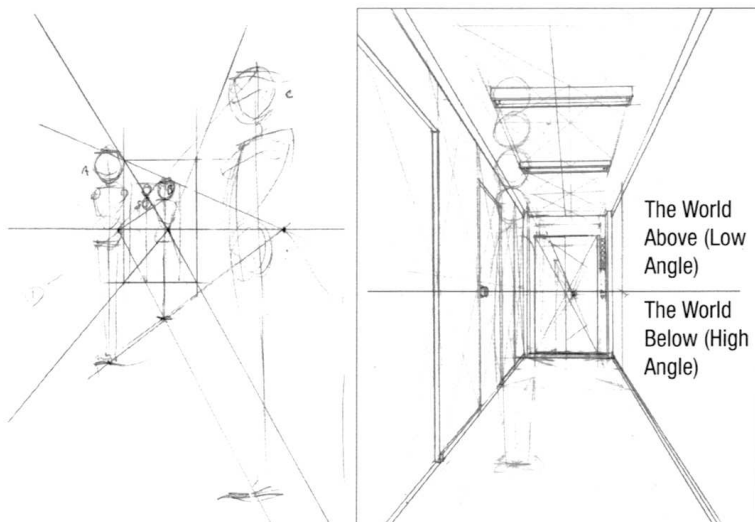


When the characters' feet are visible, use the technique of transferring the mock-up figure properly and make certain that the feet are properly planted on the floor.

Use this technique to create effects like a close-up of the head of a character appearing in front of a camera lens.

Drawing According to the Angle of Perspective

Distinct differences appear in how figures' shoulders and hips slope in drawings composed from a high or low angle.



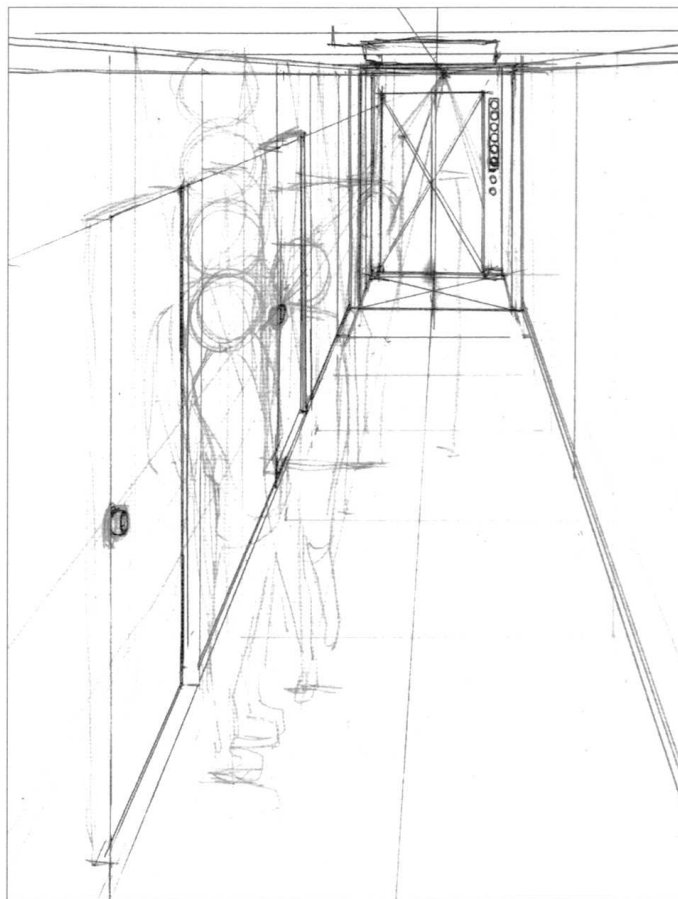
Characters are composed either from a high or low angle when the horizon line is centered in the composition (i.e. composed from a neutral position).



The hips slope in a downward curve. The collars have gentle, downward curves.

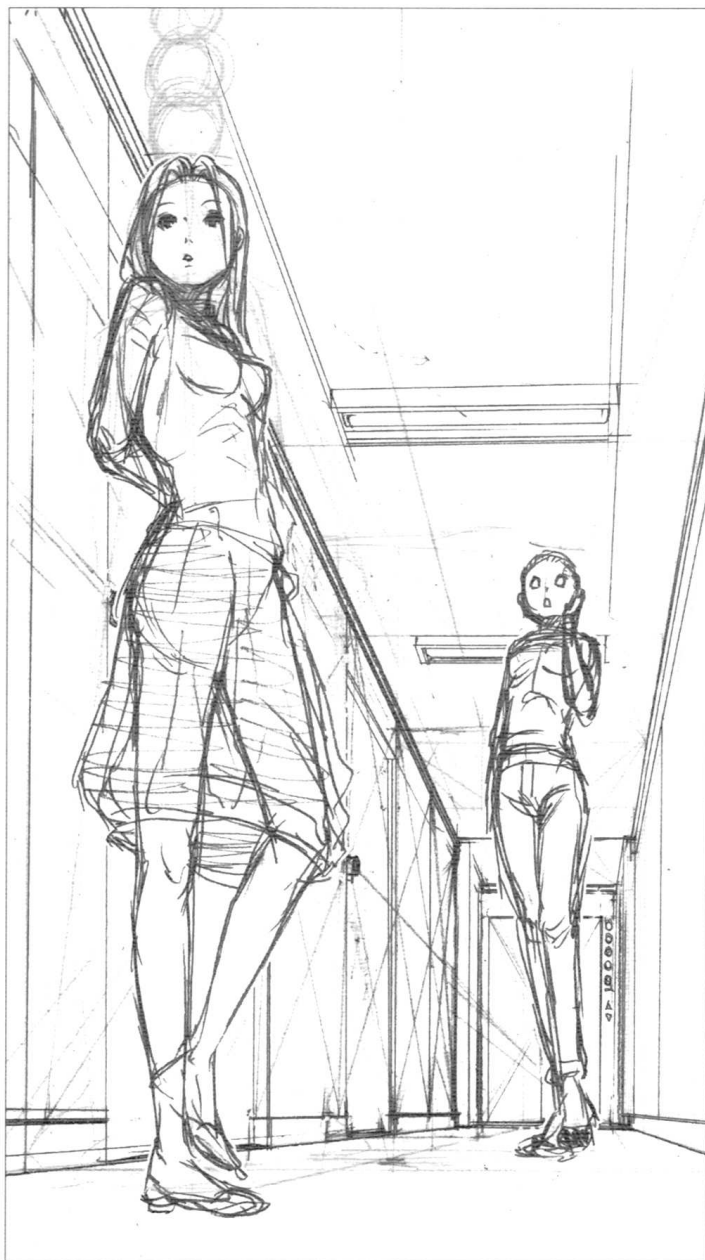


When the horizon line is positioned low in the composition, the characters are likewise drawn from a low angle.



When the horizon line is positioned high in the composition, then the characters are drawn from a high angle.

Correct



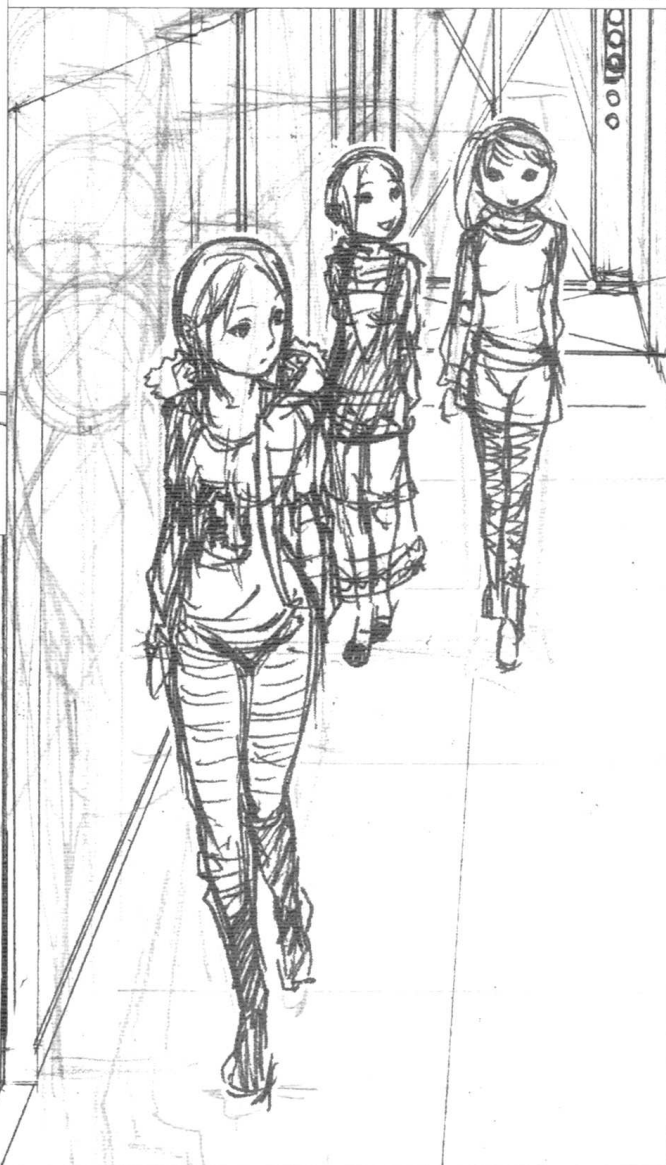
The above shows characters drawn from a low angle. The hips and collars slope in upward curves. The heads are drawn proportionally smaller.

Incorrect

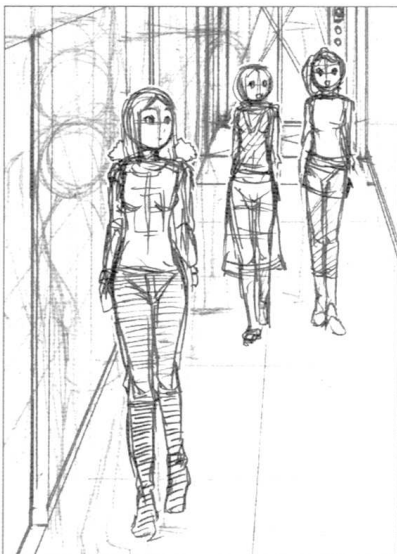


Incorrect Example: Here, the artist became caught up in head-to-body ratios and positioning the characters in the setting so as to suggest depth. As a result, they are composed from a neutral angle, and they look like they are about to careen forward.

Correct



Incorrect

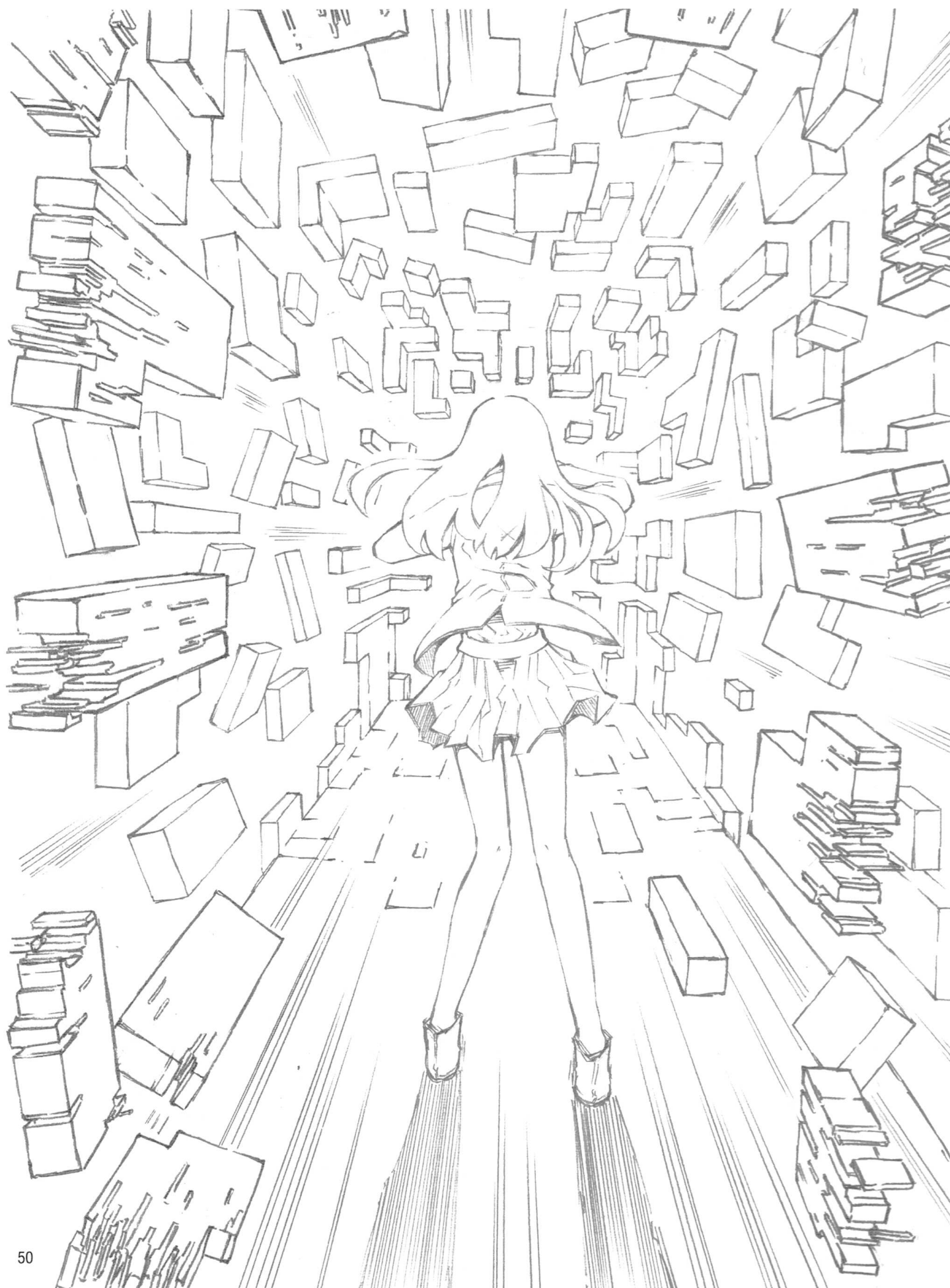


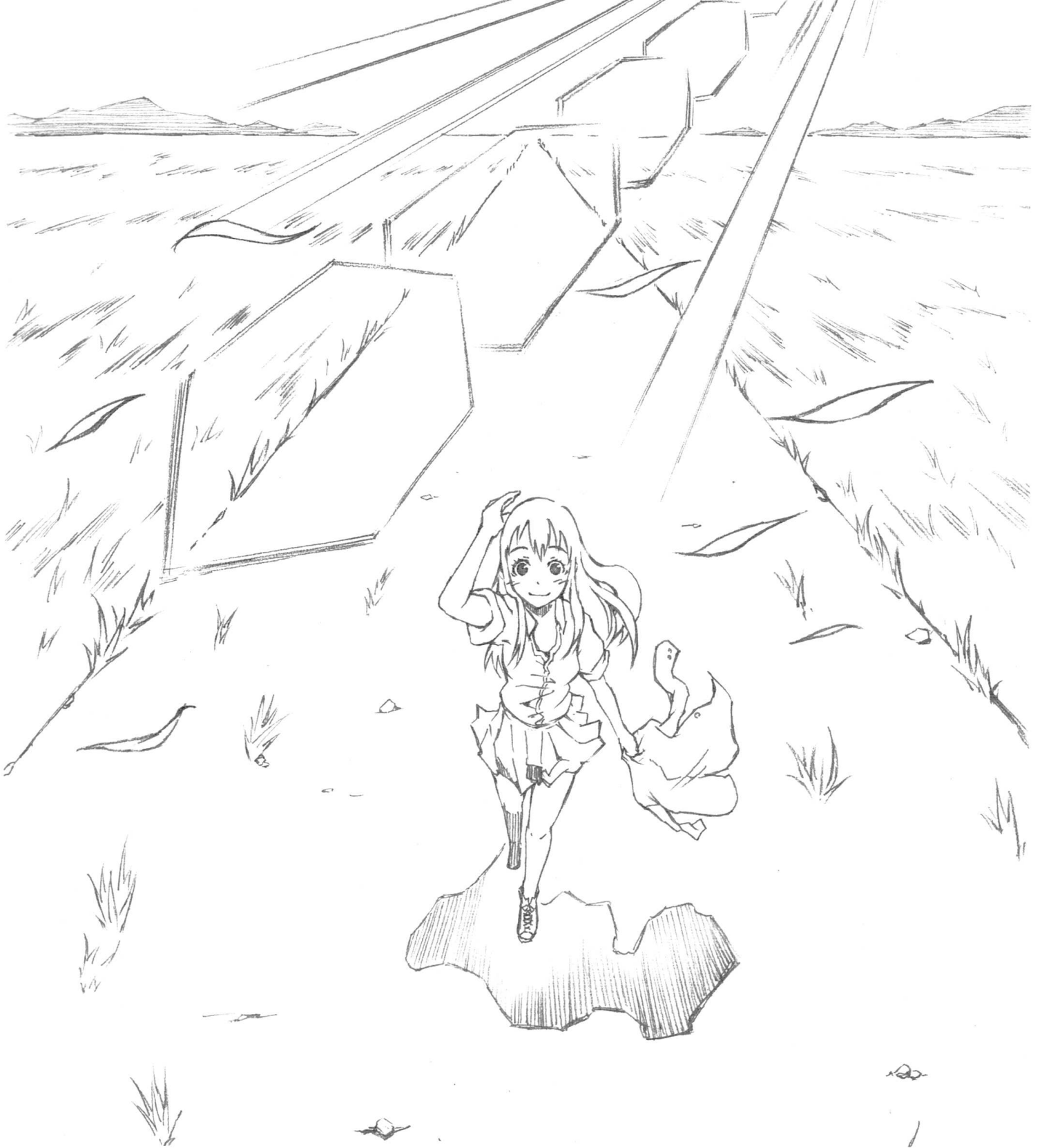
Incorrect Example: Here, the artist composed the figures from a neutral angle. They look awkward, as if they are about to topple backwards.

These characters are drawn from a high angle. The hips and collars slope in downward curves. The closer the characters are to the picture plane (or camera lens), the more the tops of their heads become visible.

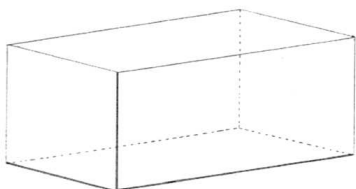
From Corridors to the Outside World

Now, let's smash down the corridor's ceiling and walls and step into the outside world.

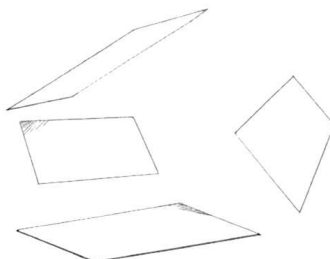




Corridors Are Tunnels



Corridors are spaces surrounded by ceilings, floors, and walls.

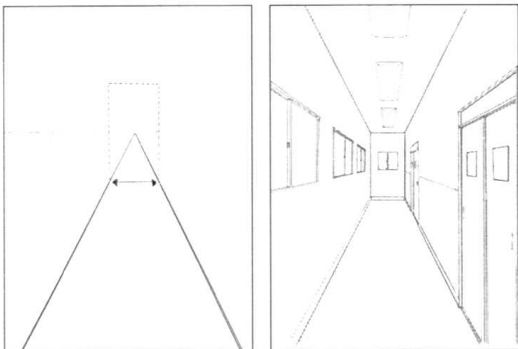
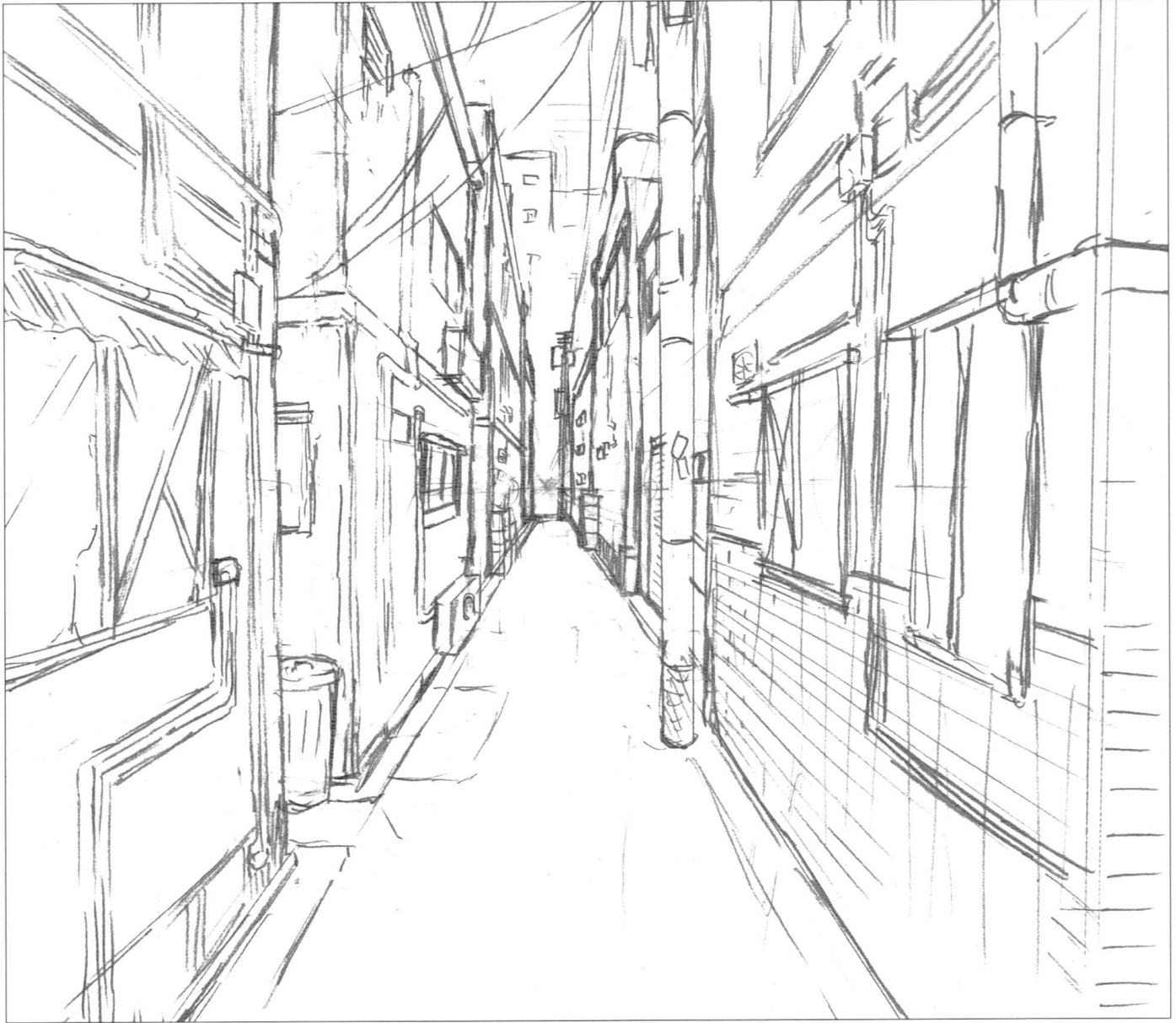


Let's take away the ceiling and walls.



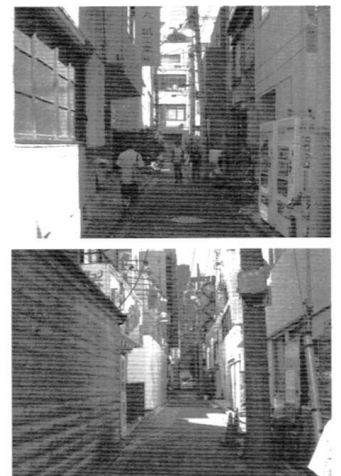
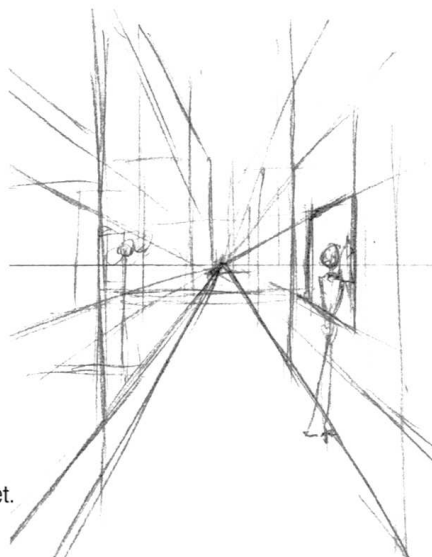
Now we are left with only the floor. We will look at this remaining floor as a "road," and use that as our departure point for learning about the outside world.

Narrow Streets



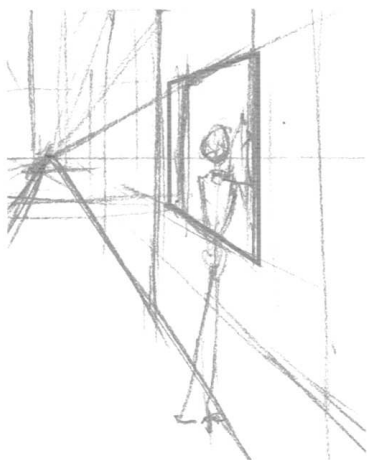
When drawing a narrow corridor like that shown above, first you would establish the corridor's width and draw the floor, and then you would draw the walls and ceiling.

The same process applies when drawing a narrow street. Use a mock-up figure to determine the positioning and sizes of building windows and doors as you draw.

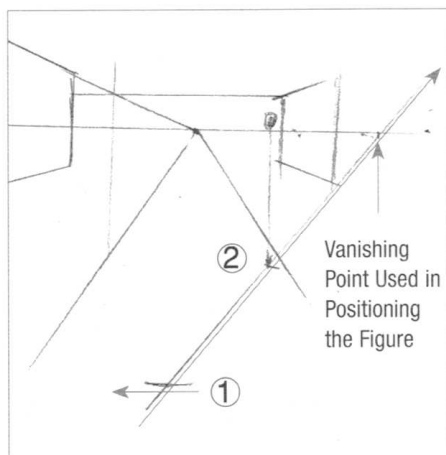


Reference Photo: Use photos as reference to determine the scale of objects or the shapes of windows and walls, etc.

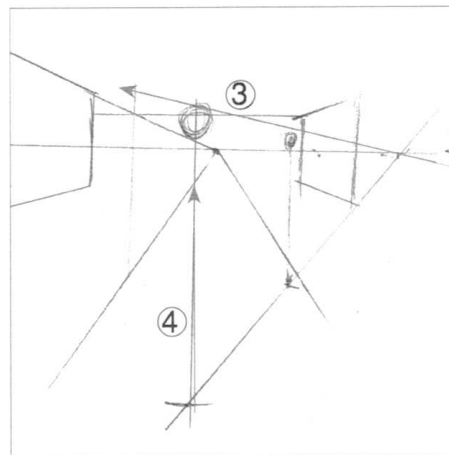
● Positioning Characters: Using Mock-up Figures



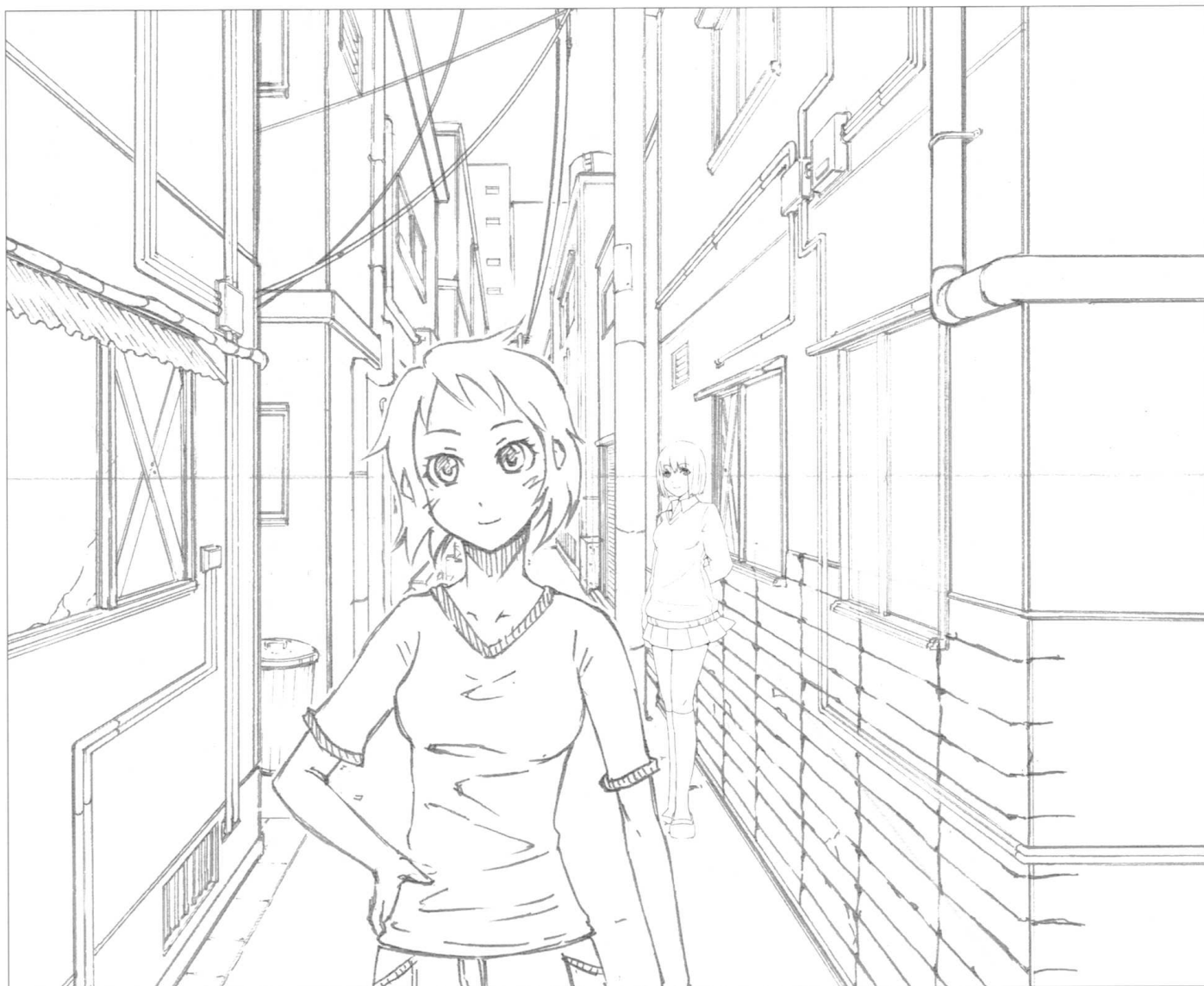
Mock-up Figure Used as the Basis for Scaling



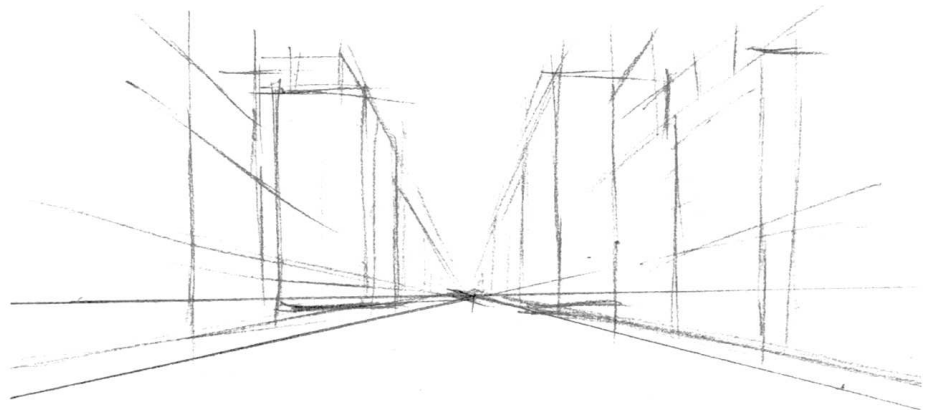
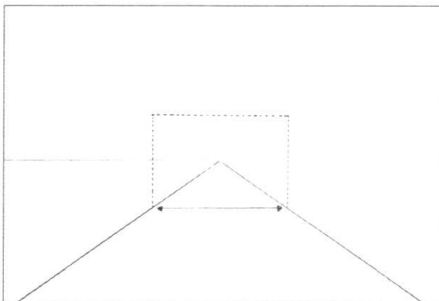
① Draw a line from the feet of the main mock-up figure to the position desired for the second character. ② Draw a line to connect the second position to the original mock-up figure.



Follow the same steps for positioning characters in a corridor to draw lines ③ and ④ above.



Here, I have drawn a character walking in a back alley.



As when drawing the doors and windows of a corridor, use vertical lines to create boxes for buildings.



This shows the narrow corridor redrawn to make it wide.

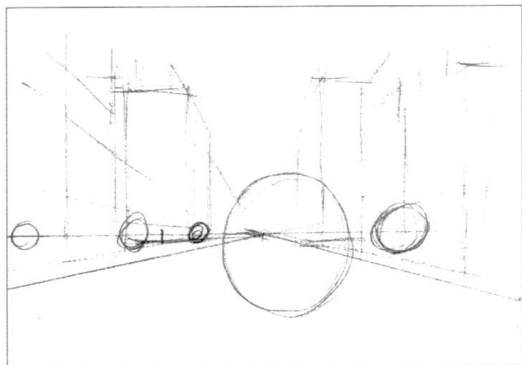


Reference Photo: The artist used this photo as reference for the buildings.

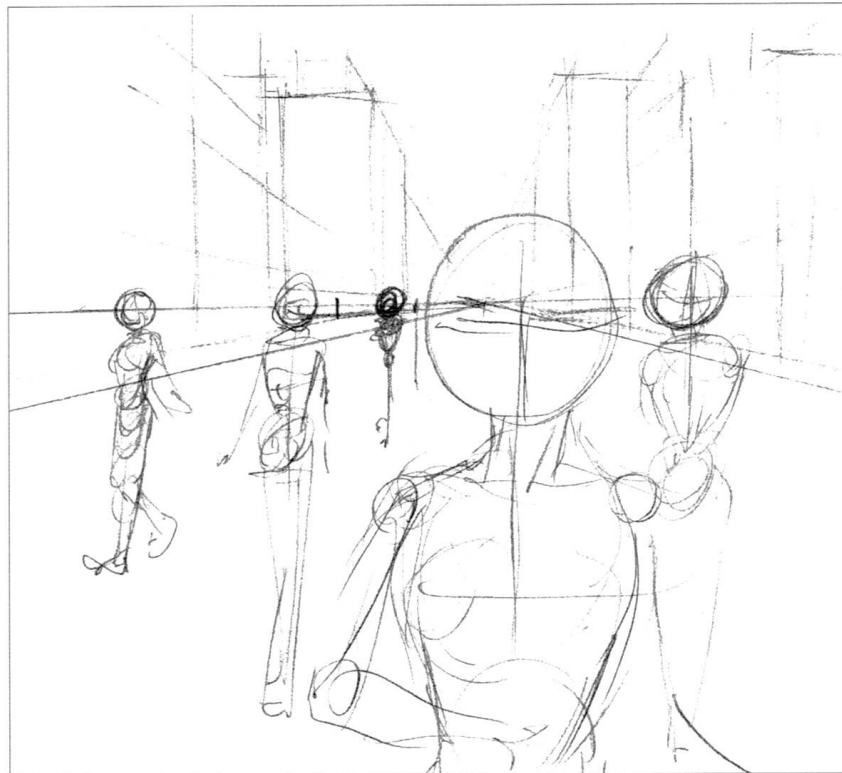
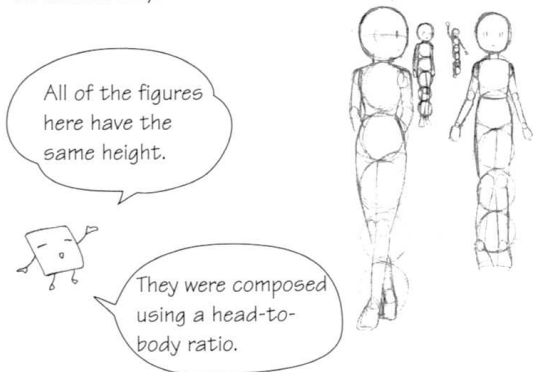


The artist used this one as reference for how to portray the street.

● Positioning Characters: Drawing Heads at Eye Level



① Draw large and small circles at eye level (i.e. along the horizon line).



② Size the figures to match the large and small circles drawn previously.



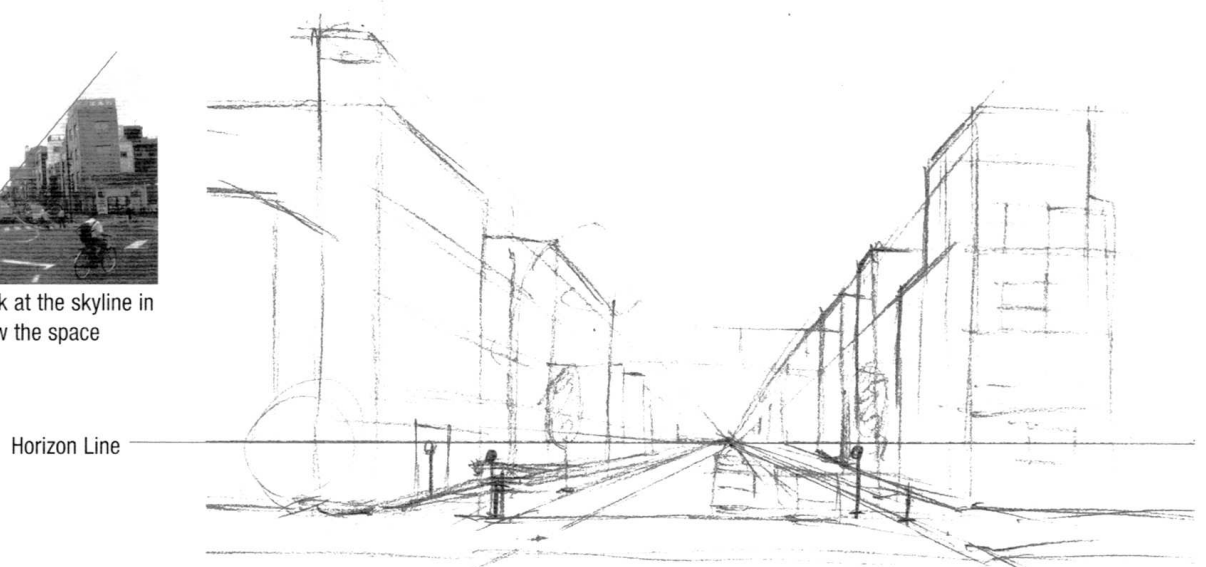
③ Now the figures walking along the wide avenue are finished.

Broad Avenues

Correctly capture the scaling of objects along the avenue (guardrails, etc.) with respect to the mock-up figure.

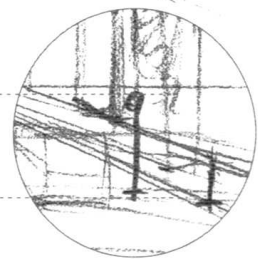
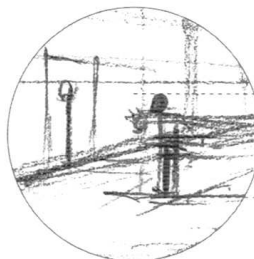


Reference Photo: Look at the skyline in photos to capture how the space expands.

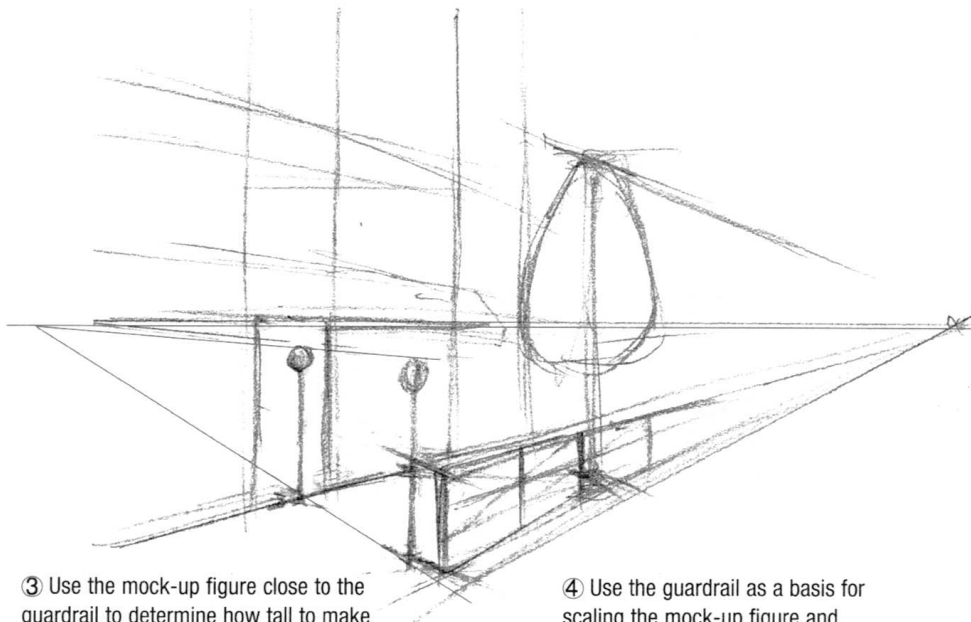


① Sketch the buildings as boxes.

② Position mock-up figure next to doors and guardrails.



Pay attention when drawing to ensure that the guardrails and characters are parallel to one another and that the avenue lies between them.



③ Use the mock-up figure close to the guardrail to determine how tall to make another mock-up figure that you will use as a basis for scaling the buildings.

④ Use the guardrail as a basis for scaling the mock-up figure and the trees lining the street.

Establishing the Scale of Common Objects Seen along a Street

Use the Heights of Mock-up Figures to Establish the Scale of Large Objects



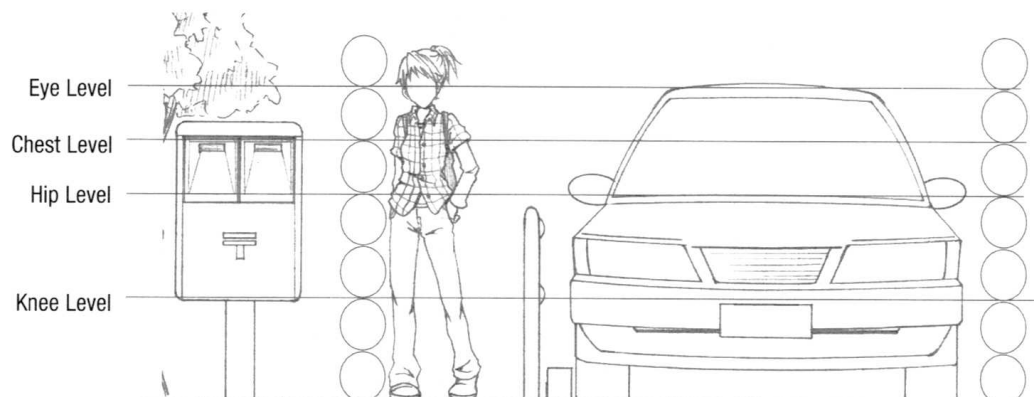
Estimate the mock-up figure to be between 150 cm and 160 cm (approx. 4' 9 1/16" to approx. 5'3").



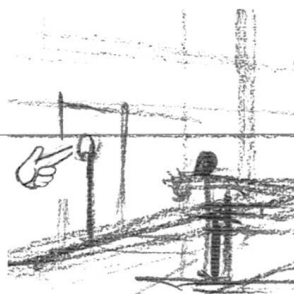
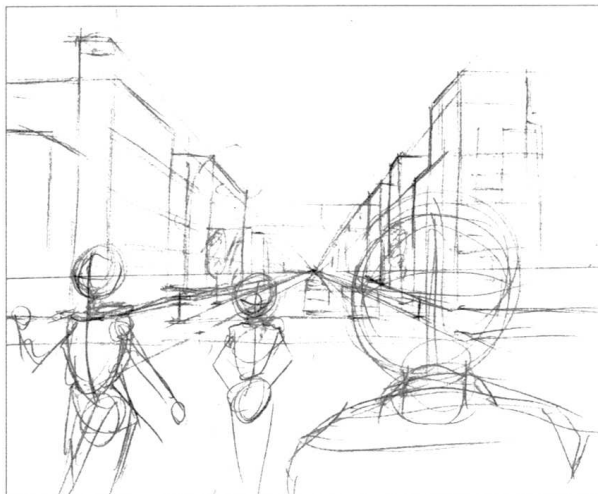
Body Part Lengths to Establish the Scale of Small Objects



Estimate the head to be between 20 cm and 24 cm (approx. 7 7/8" to 9 15/16").

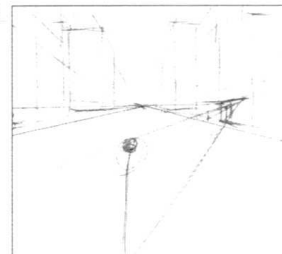


● Positioning Characters: Drawing Characters' Faces along the Horizon Line



In actuality, the character's eyes are only slightly below that of the horizon line, which means that strictly speaking, this character should be composed from a high angle.

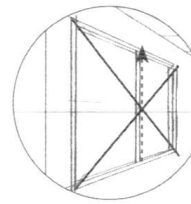
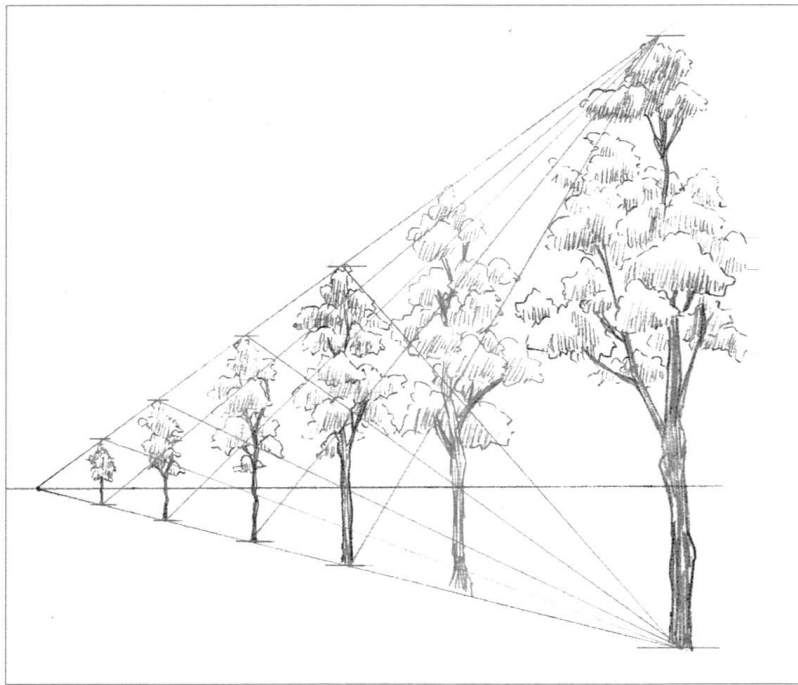
While the eye level of this character is only slightly shifted from the horizon line, having all of the characters' faces aligned would give the composition a more natural sense of depth.



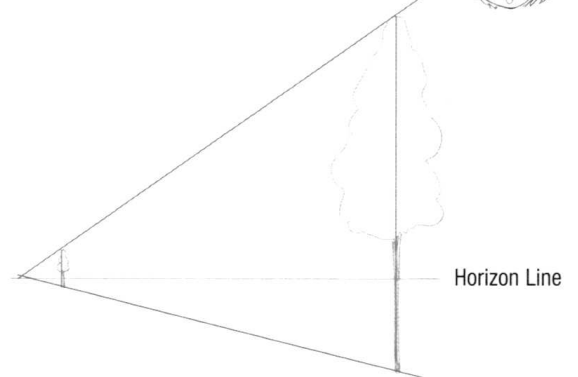
Transferring a mock-up figure located slightly under the horizon line to other locations in the composition further accentuates the sense of a high angle perspective, which, in turn, results in an awkward composition.



● Using the "X Method" to Draw Trees

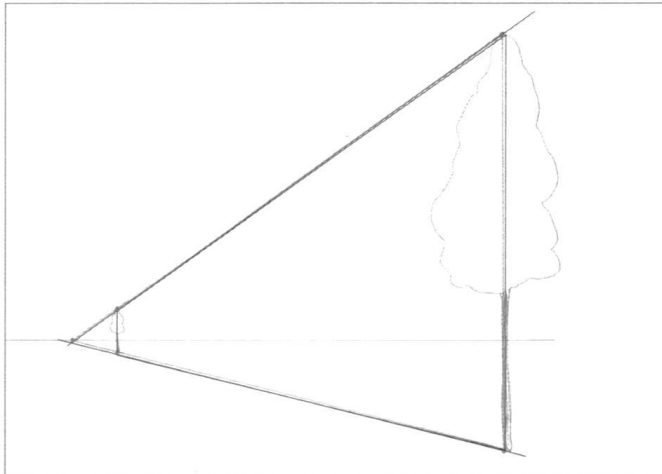


The "x method" consists of drawing transverse diagonal lines across a rectangle and then using the point where the two lines intersect to divide that rectangle into half.

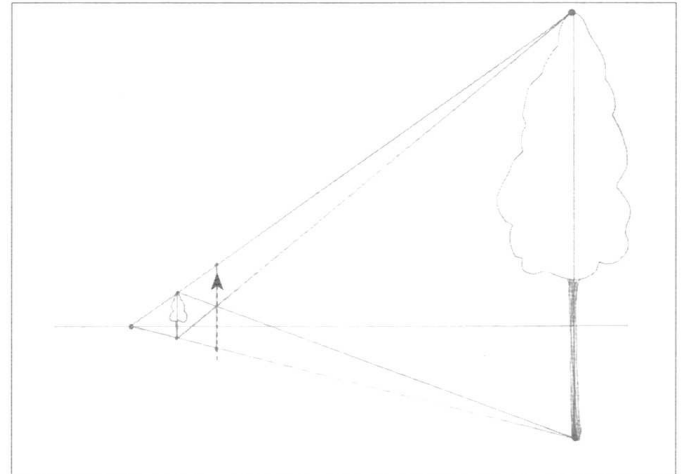


Horizon Line

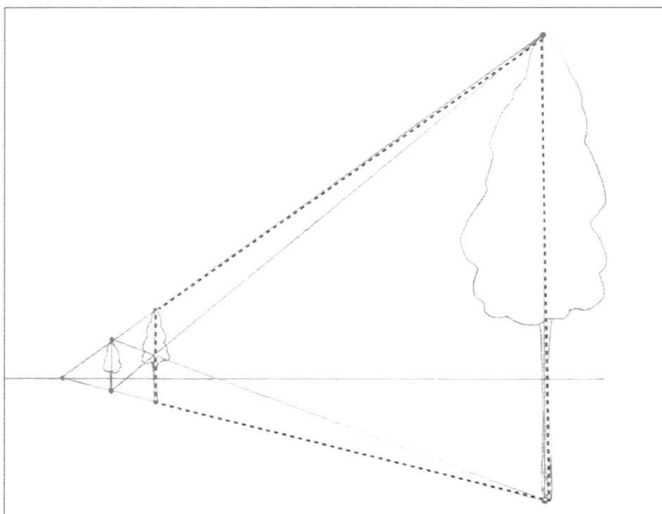
① Draw the horizon line and the trees closest and farthest from the picture plane. If the vanishing point's position is predetermined, as when drawing an avenue, use this point as a basis for drawing depth lines.



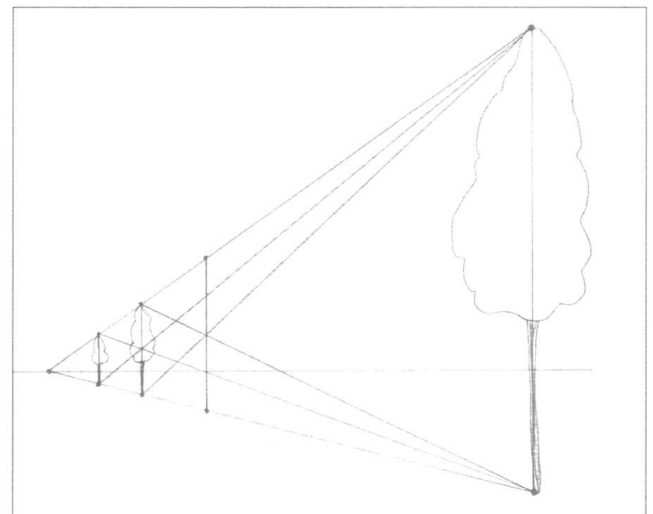
② Conceive of the tree as one of the rectangle's sides and sketch a geometrical diagram like that seen above.



③ Use the "x method" to locate a point midway between the two trees.



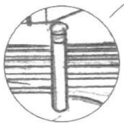
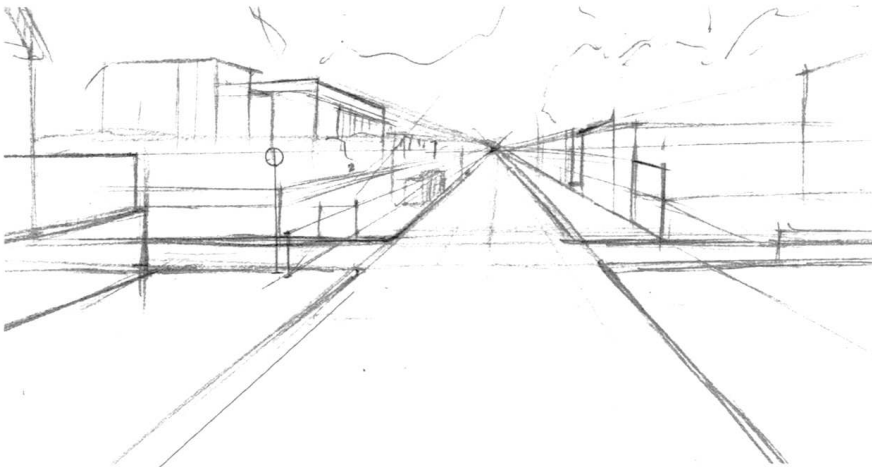
④ Now we are able to draw a third tree at the midway point between the original two trees. The next step is to create another geometric diagram using this new, third tree and the tree close to the picture plane to locate the midway point for a fourth tree between these two.



⑤ Draw each tree as if planting one after the other, closer and closer to the picture plane.

Street Intersection in a Residential Area

This is a modification of a one-street composition. Since it depicts streets intersecting at 90° angles, it may also be applied to drawing corridors with 90° bends and the like.



Poles on the street corners serve as guides for determining the mock-up figure's height.

This was composed from the street's center. Draw the intersecting street horizontally and narrower than the one toward the picture plane.



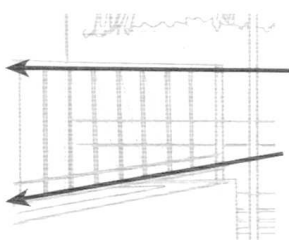
Reference Photo: Use the reference photo to capture the width of the horizontally intersecting street.



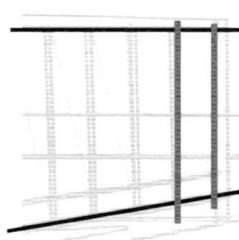
Guardrails of wide avenues come to a human's hip or groin in height.

The short poles should end approximately at or slightly above the knees.

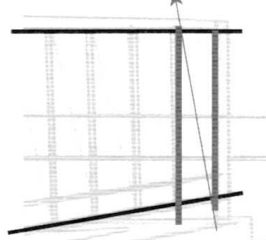
● Using the "N Method" to Draw Fences



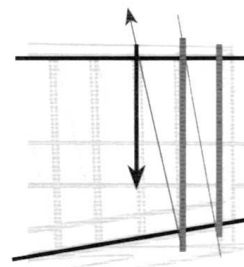
① Draw the fence's top and bottom lines originating from the vanishing point.



② Draw the first iron rail. It will serve as a basis for scaling the remainder.



③ Draw a diagonal line connecting the top corner of one rail with the bottom corner of the other. This should create an "N".



④ Draw a diagonal line parallel to the first diagonal line. Next, draw a vertical line from the point where the second diagonal line intersects the top line.

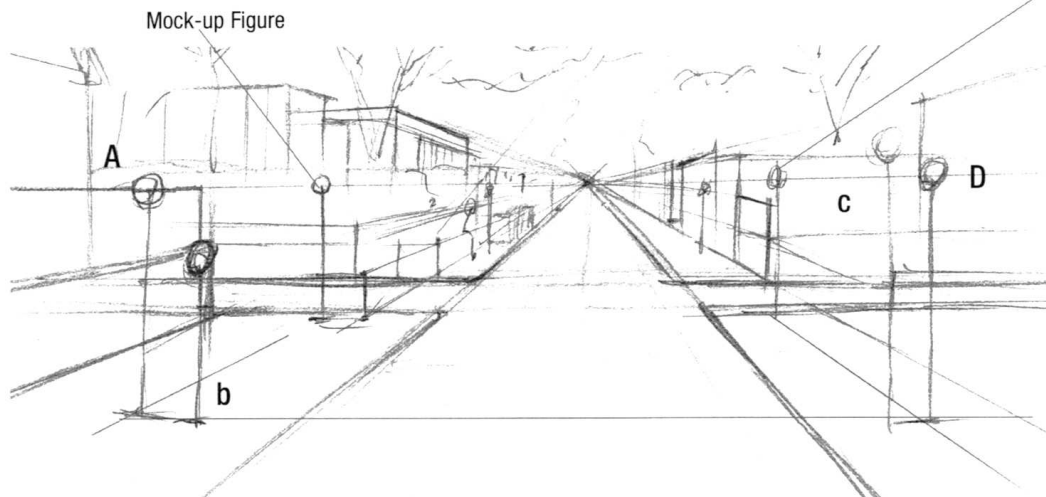
To create the remaining rails, simply repeat these steps.



● Drawing Characters: Maintaining Awareness of the Horizon Line and Height Differences When Distributing Characters



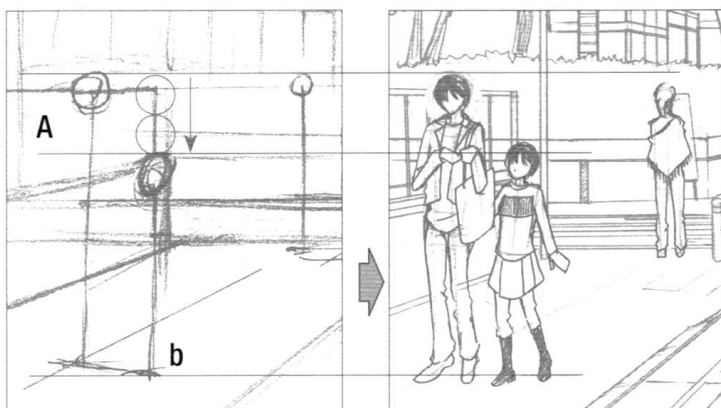
This drawing is meant to look like a long-range snapshot, so most of the characters have the same-sized heads.



This extra character was added by laterally transferring a standing mock-up figure from across the street.

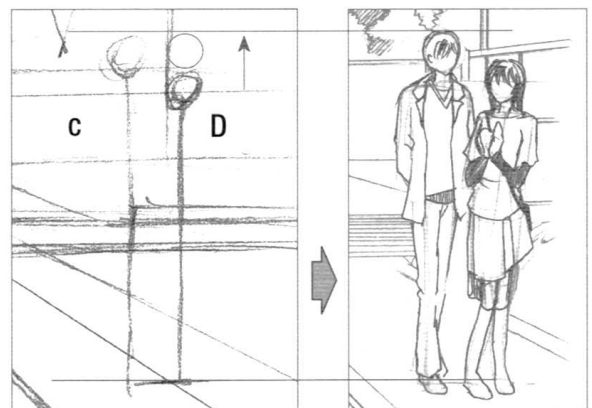
Characters A and D (as well as the mock-up figure) are the same height.

Removing Head-Lengths to Draw Shorter Figures



Draw Character b about two head-lengths (approximately 40 cm or 15 3/4") shorter than Character A to make Character b look convincingly like a child.

Adding Head-Lengths to Draw Taller Figures



Make Character c one head-length taller than Character D to make him appear taller.

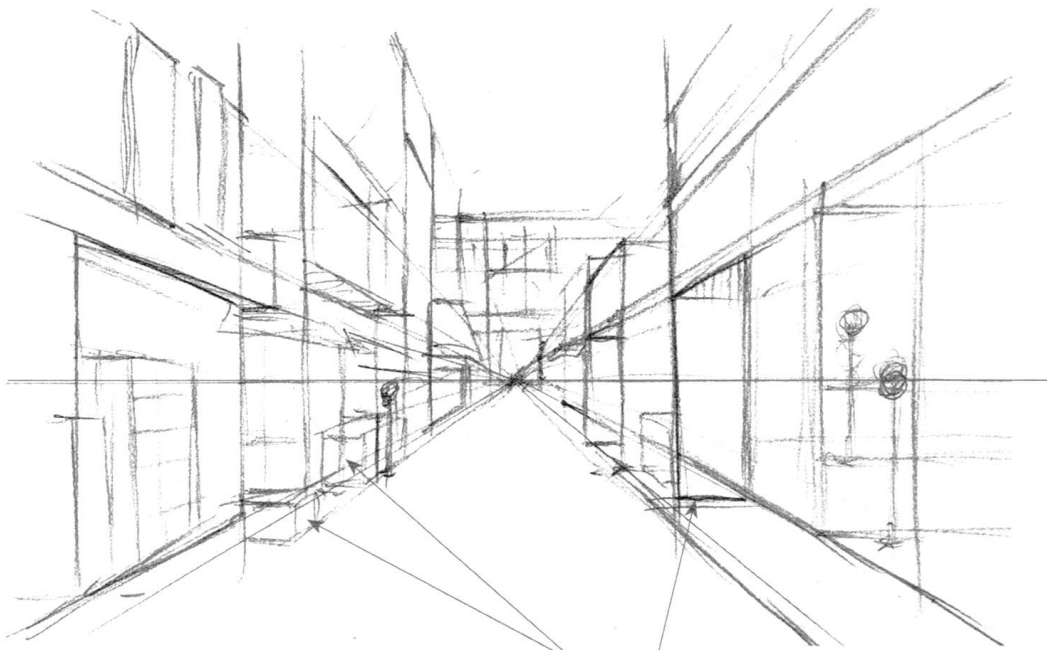
Shopping District

T-shaped Intersection

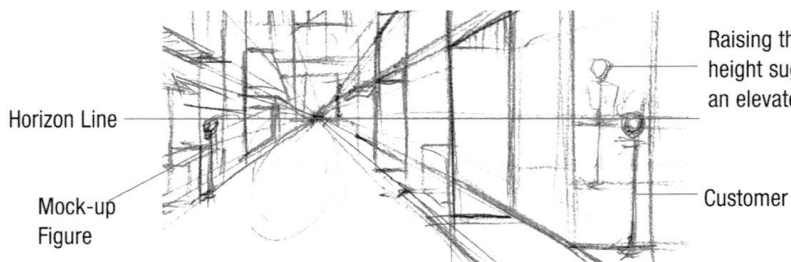


Reference Photo: Use the street lamp forms and the store fronts as reference when drawing. Feel free to eliminate street signs and the like.

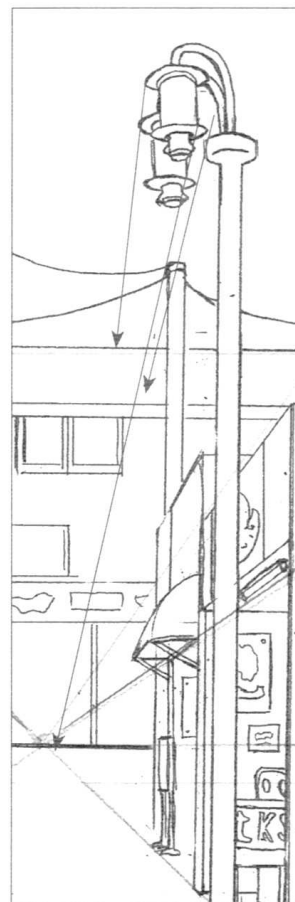
Use eaves, overhanging roofs, awnings, etc. to make the store fronts look convincing. Also, incorporate fancy street lights and other accessories to evoke the authentic feel of a shopping district.



You must accurately draw the street's depth lines that move toward the vanishing point in order to draw objects and goods placed at the store fronts and walls properly.



Raising the store clerk's height suggests a store with an elevated register counter.

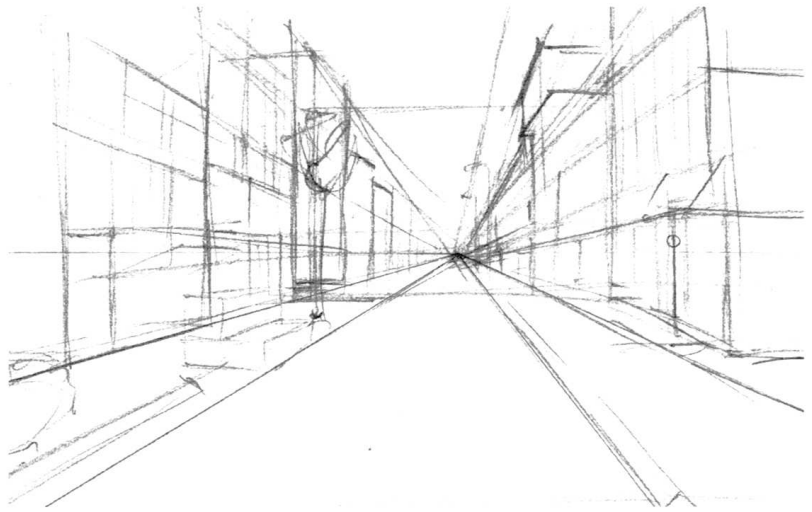


Use lines moving toward the vanishing point to draw the street lamps as well.

Single Street



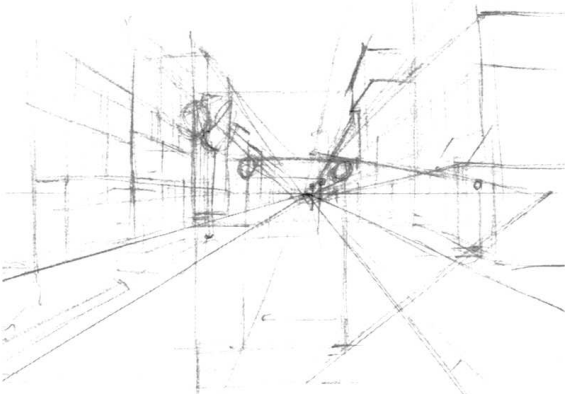
Reference Photo



Use diagonal lines moving toward the vanishing point to establish the positions of jutting out eaves, awnings, and roofs and to establish the heights of buildings' second stories.



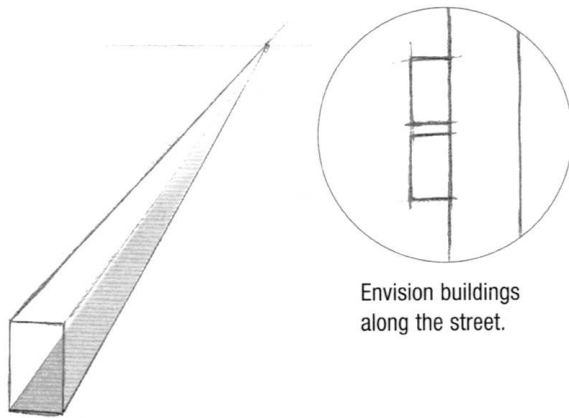
● Positioning Characters: Transferring Mock-up Figures



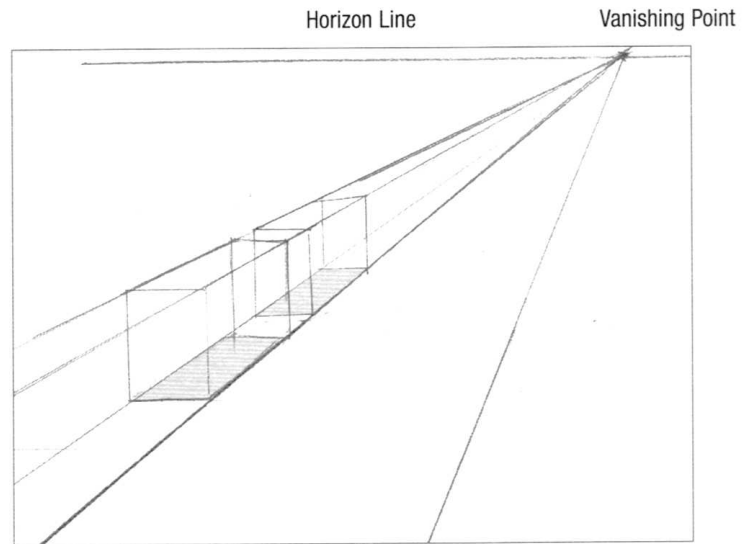
Using One-Point Perspective to Draw Bends and Slopes in Roads

Use multiple vanishing points.

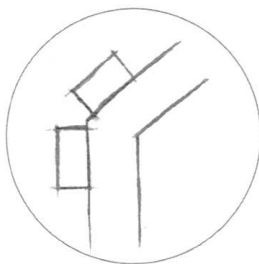
Horizontally (Right and Left) Positioned Vanishing Point: Bending Road



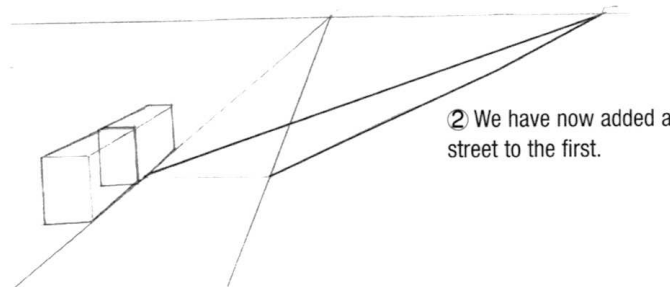
A tunnel drawn in one-point perspective is straight.



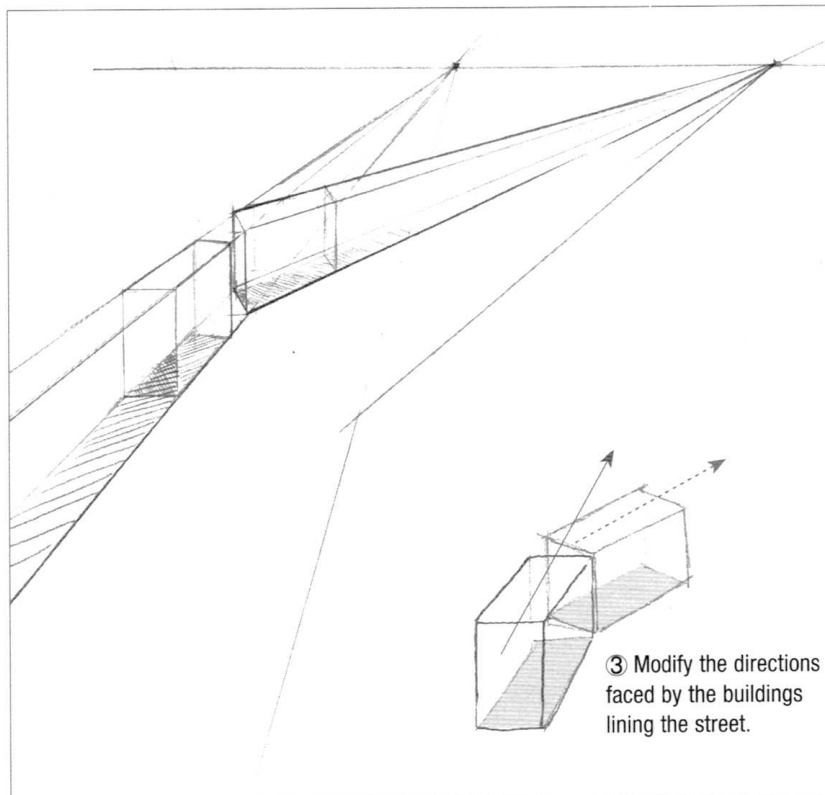
① This shows a single street, traveling infinitely along a straight line.



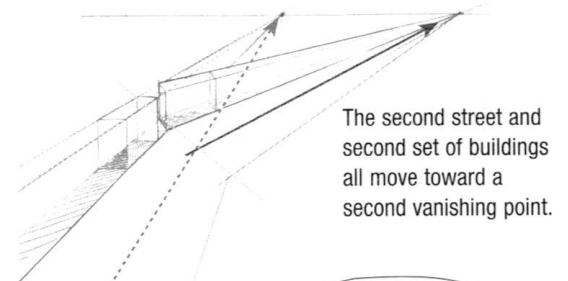
Picture building along the street.



② We have now added a street to the first.

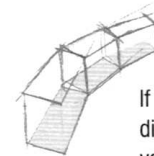


③ Modify the directions faced by the buildings lining the street.



The original street and original buildings all move toward the original vanishing point.

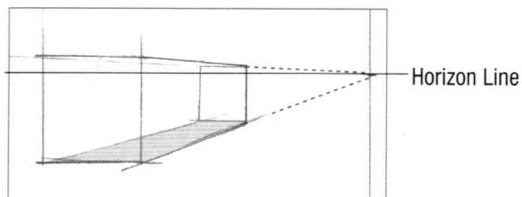
Follow the same method, using multiple vanishing points to draw bending roads.



If the road bends in three directions, then use three vanishing points.

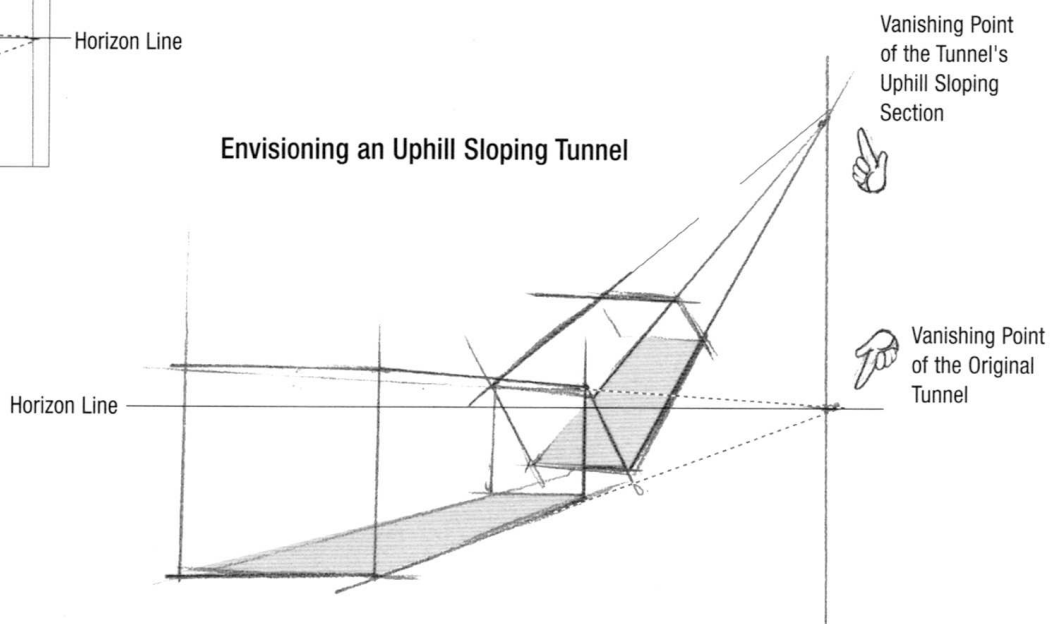


Vertically Positioned Vanishing Points: Sloping Roads and Steps

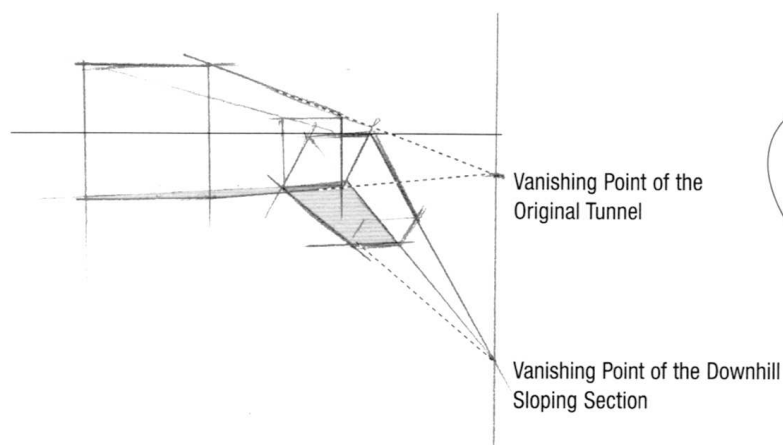


The tunnel has a significantly raised horizon line.

Envisioning an Uphill Sloping Tunnel



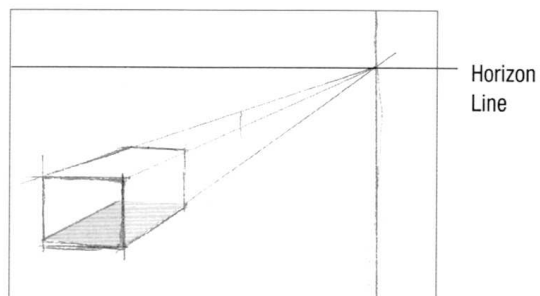
The Same Applies to Downhill Sloping Tunnels



As when drawing a bending road, use multiple vanishing points to compose each section of an uphill or downhill sloping road in one-point perspective.

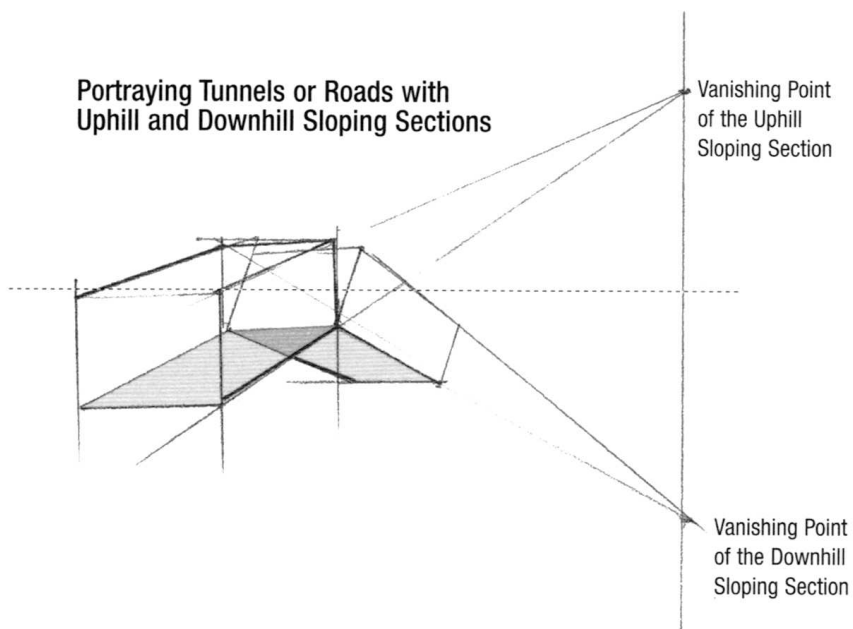


Starting with an Uphill Sloping Tunnel

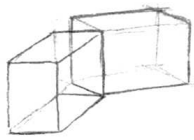


Drawing this section alone makes it appear to be a typical tunnel drawn from a high angle.

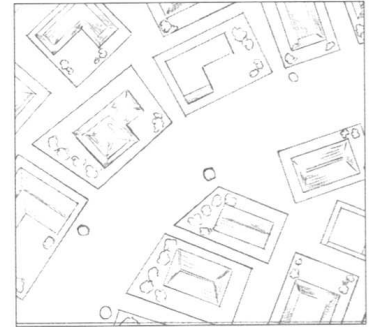
Portraying Tunnels or Roads with Uphill and Downhill Sloping Sections



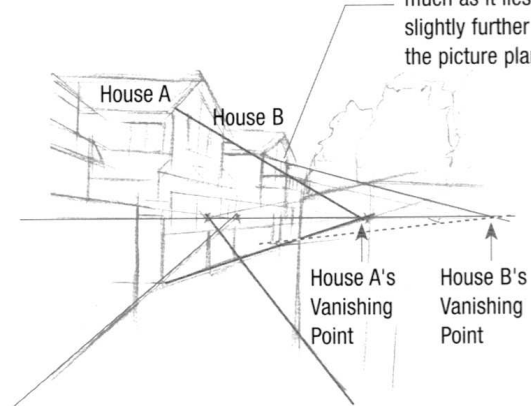
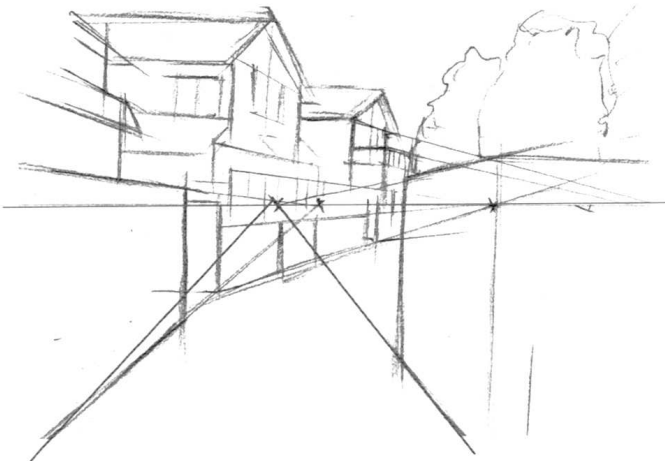
Bending Roads



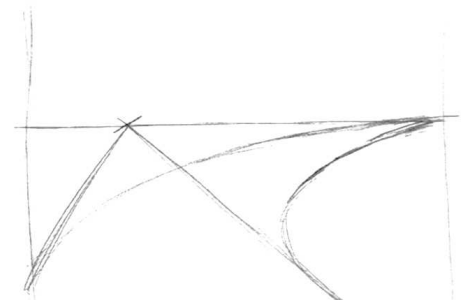
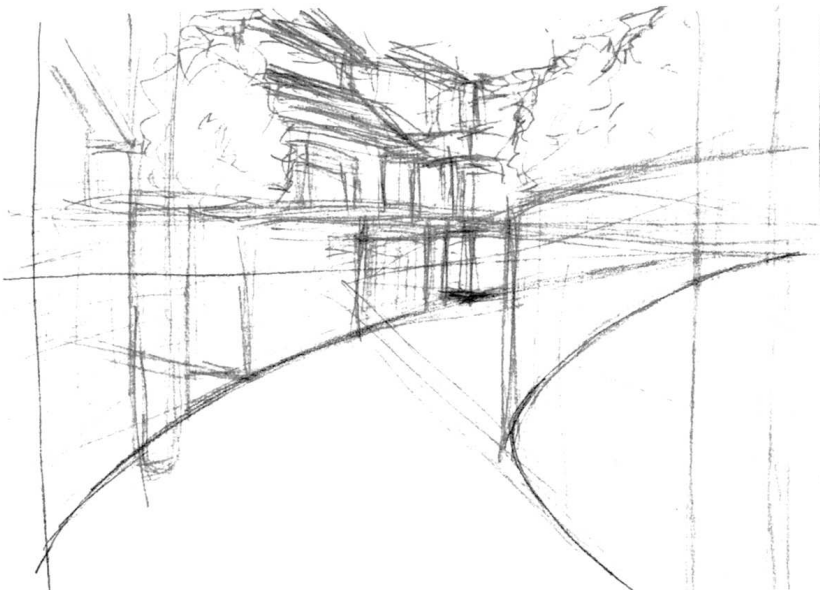
Use one-point perspective with multiple vanishing points distributed horizontally.



This aerial view shows that most of the streets curve or bend.

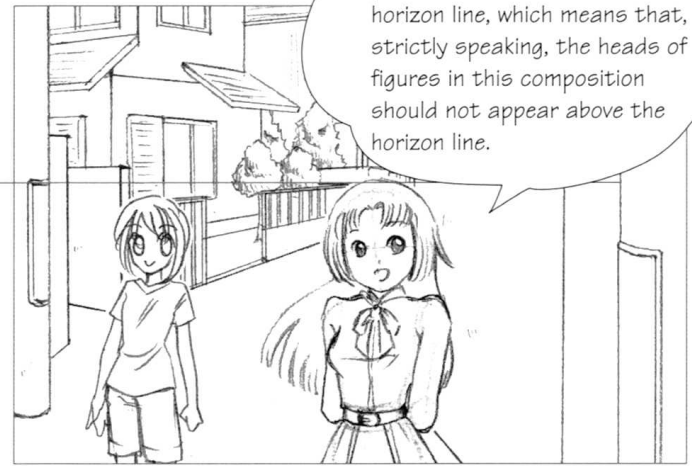
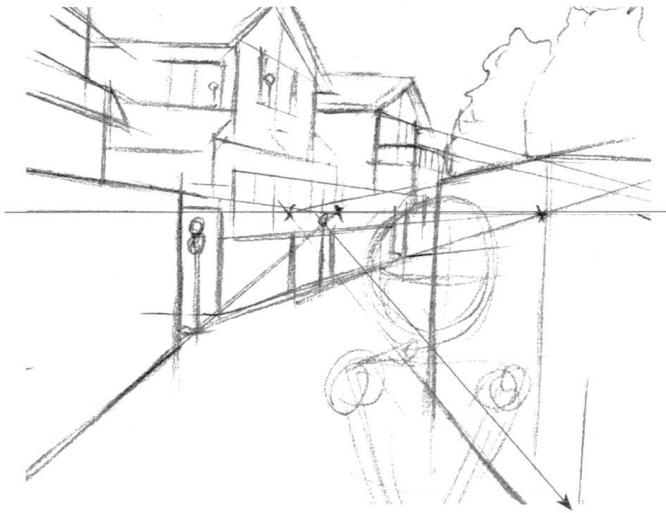


House B does not follow the bend in the street so much as it lies turned slightly further away from the picture plane.



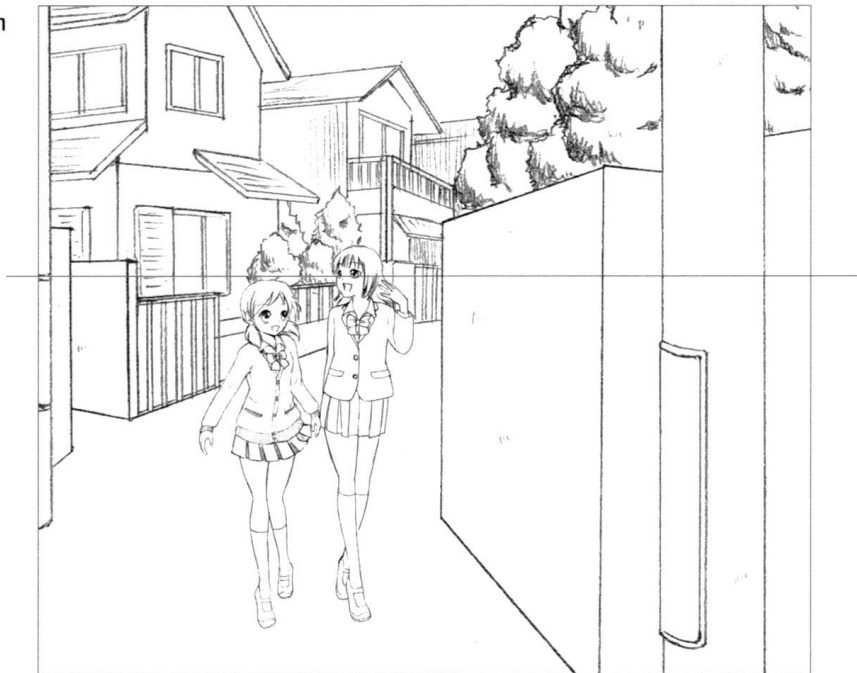
This technique may also be used to draw a road forking into a straight branch and a bending branch.

● Positioning Characters: Aligning the Characters along the Horizon Line



Snap-Shot Style Composition

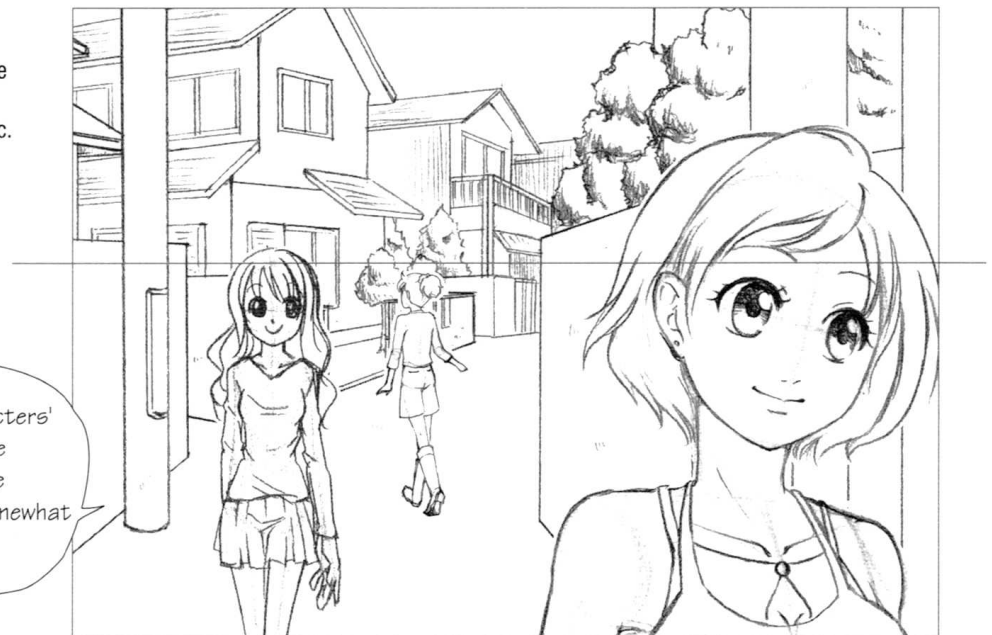
This portrays a scene photographed from a long range. The height difference feels natural owing to the distance portrayed.



Dynamic Composition

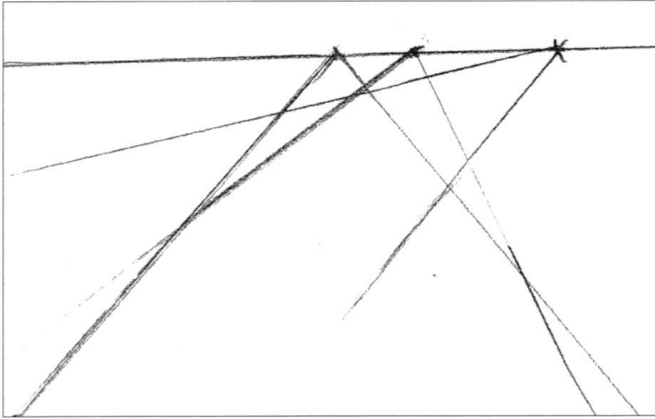
Including a close-up of one character makes the composition more dynamic.

Positioning the characters' eyes slightly below the horizon line makes the composition seem somewhat tranquil.

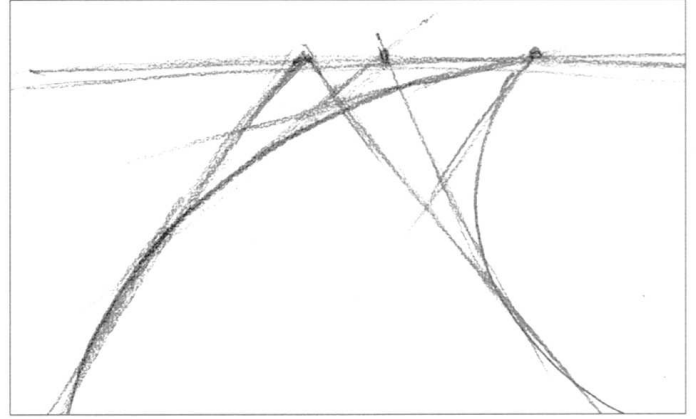


● Conceiving of Curves in Roads as Many Intersecting Roads in One-Point Perspective

Steps to Drawing a Curve in a Road

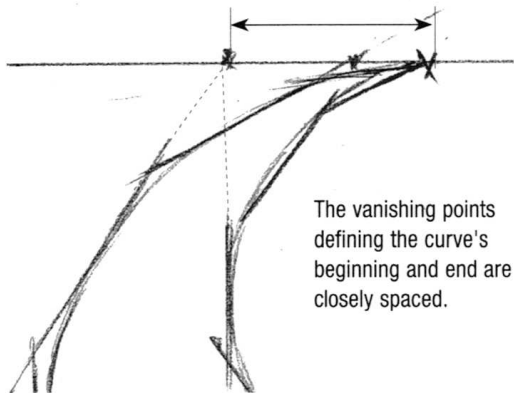


① Roughly sketch three roads traveling toward three different vanishing points.



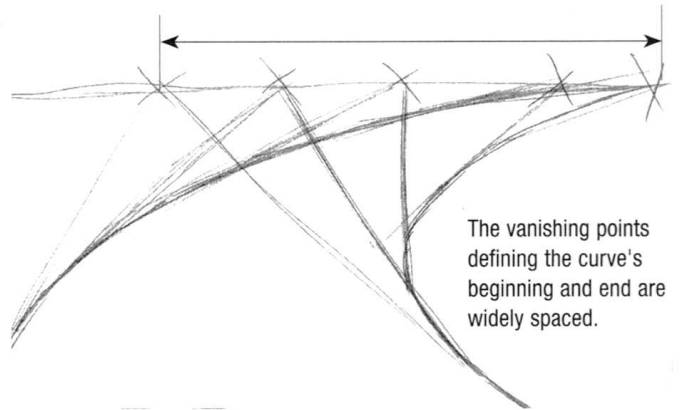
② Use arcing lines to connect the points where the roads intersect with each other.

Gentle Curves



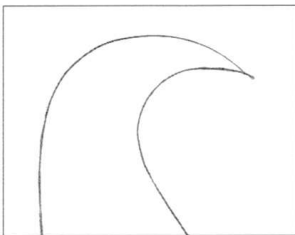
The vanishing points defining the curve's beginning and end are closely spaced.

Sharp Curves

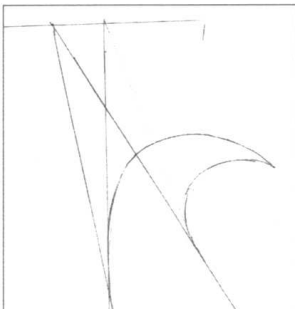


The vanishing points defining the curve's beginning and end are widely spaced.

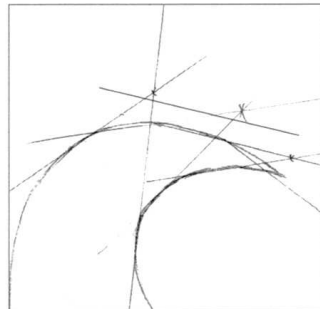
● Incorrect Example and Explanation



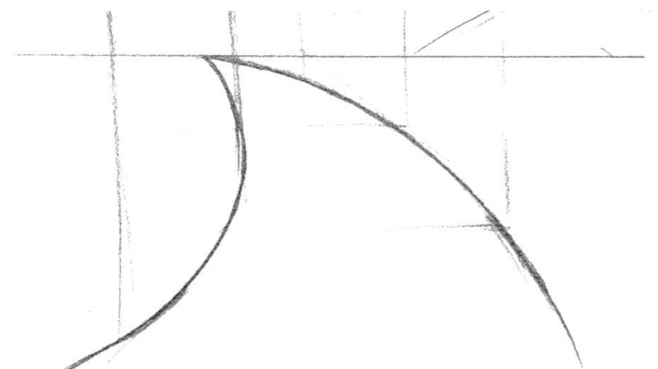
The artist intended to draw a curve in a road. Instead, it looks like slope.



Connecting the vanishing points reveals that the composition has a crooked horizon line.



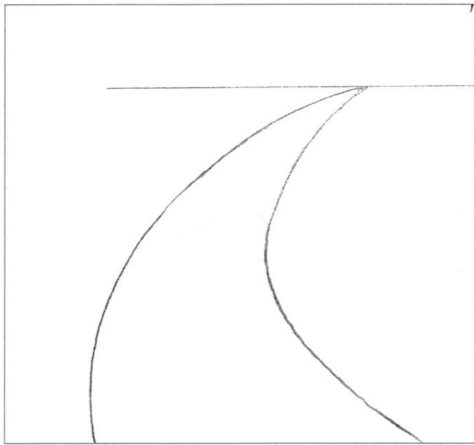
The road's end does not move toward a vanishing point in a straight line.



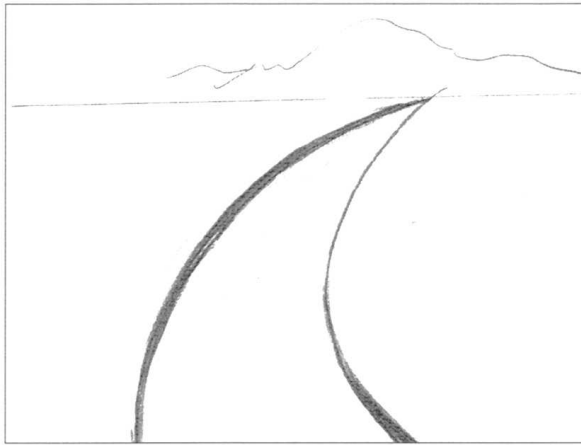
When drawing curves in roads, make sure that you have correctly established the horizon line.



Drawing Rivers

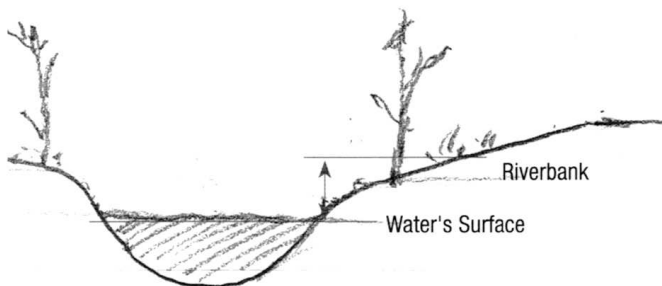


① Establish the horizon line and draw a curve.

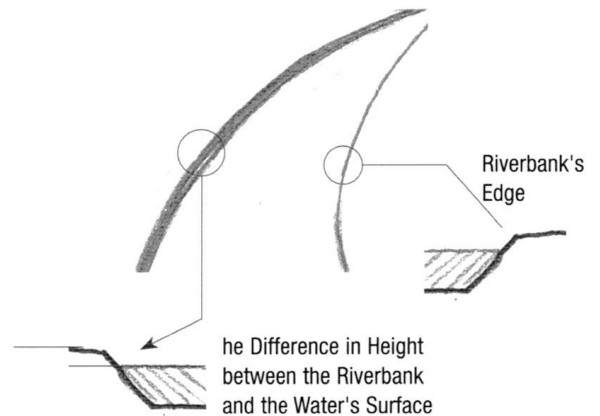


② Give depth to the curve's sides.

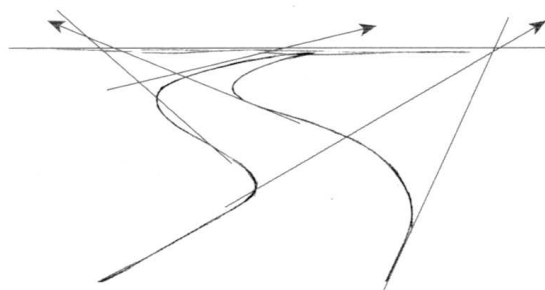
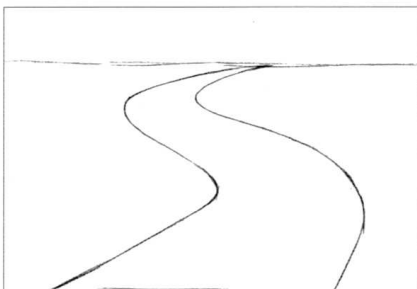
Giving Depth to a Curve Creates a River



Cross Section of a River



Winding Rivers



A large S-curving river comprises three directions. Be conscious of where the three vanishing points are located when drawing.

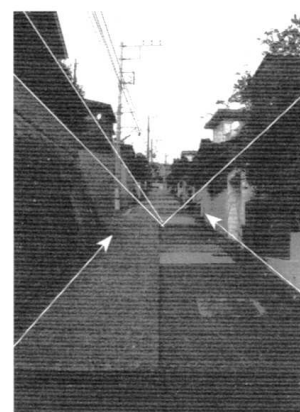
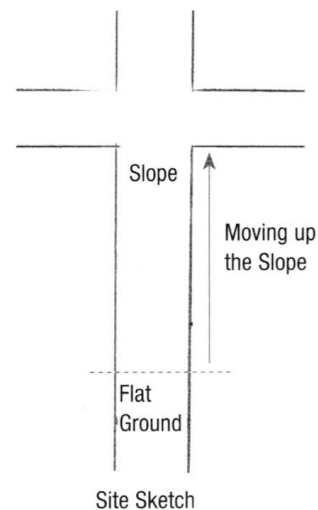
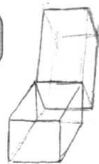


Be bold in defining the river's sides, maintaining awareness of how the edges have depth beneath the water's surface.

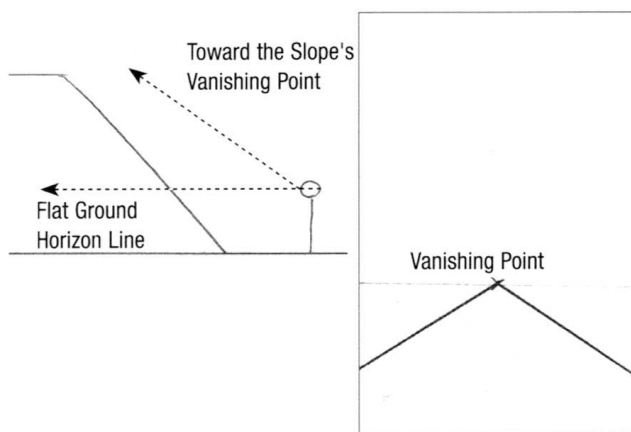
Sloped Streets

Uphill slopes

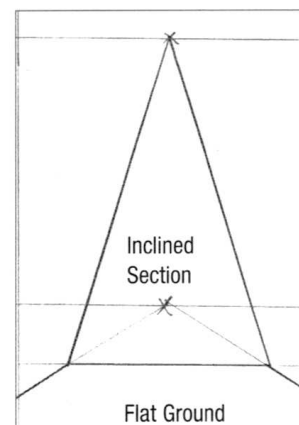
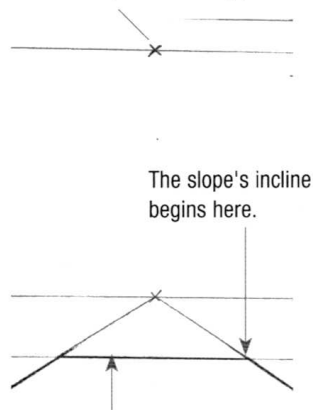
Use one-point perspective with two vanishing points along a single direction.



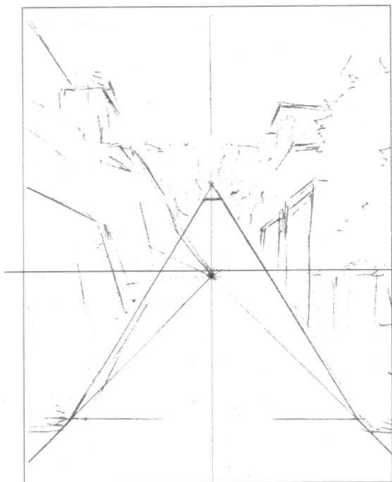
Reference Photo: Note that the vanishing slope of the road and the houses' walls move toward different vanishing points.



Establish the slope's vanishing point.

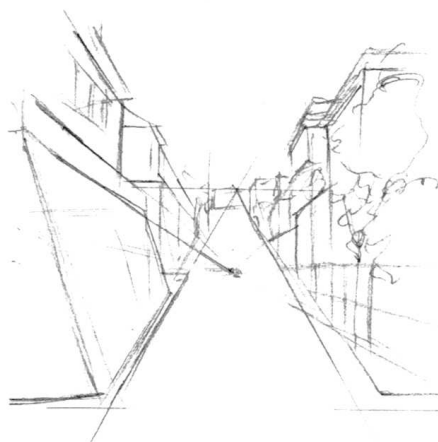


The above shows roughly the form of a sloped street moving from a single, flat road toward an inclined vanishing point.

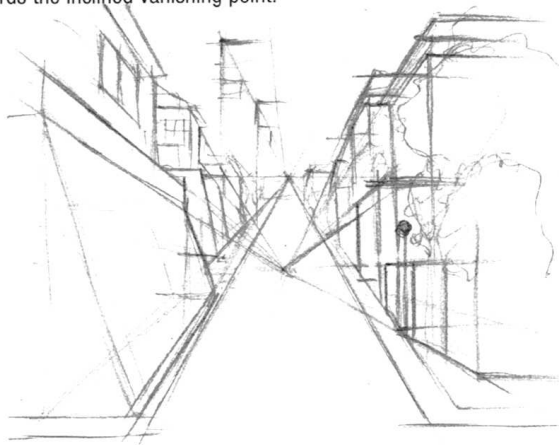


Draw the horizon line and two vanishing points. Sketch the composition in general terms.

The telephone and electrical poles disappear towards the inclined vanishing point.

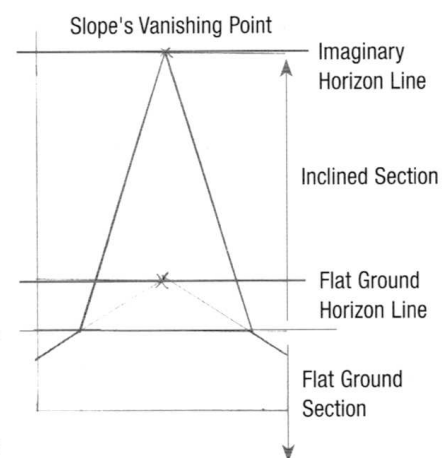
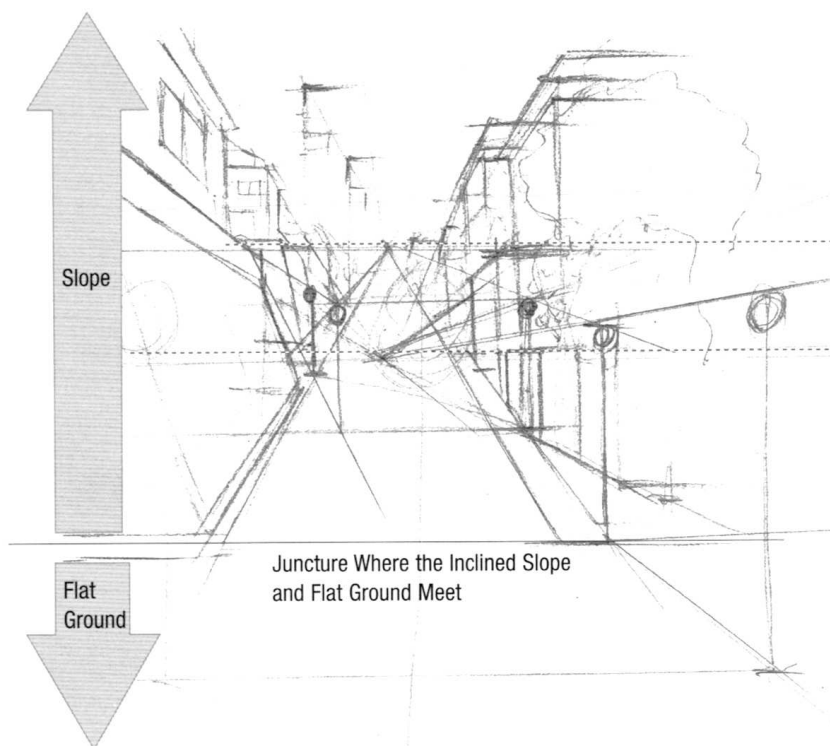


Draw all of the buildings' depth lines moving toward a vanishing point along the horizon line.



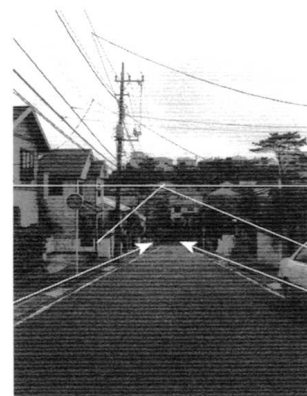
Position a mock-up figure at the gate.

● Positioning Characters: Mock-up Figures and Lateral Transferring

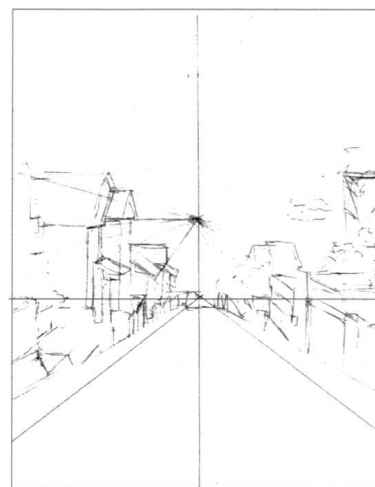


● To position characters on the inclined section, establish the imaginary horizon line and transfer the characters around the space using mock-up figures.

● To position characters on the flat ground section, use the horizon line for the flat ground.



Reference Photo

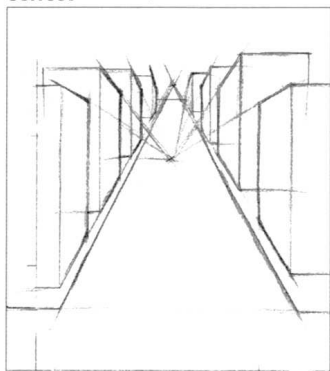


Establish the horizon line and the location of two vanishing points. Then, produce a rough sketch of the scene.

● Key Points in Sketching: Draw One Vanishing Point for the Road and Another for the Houses

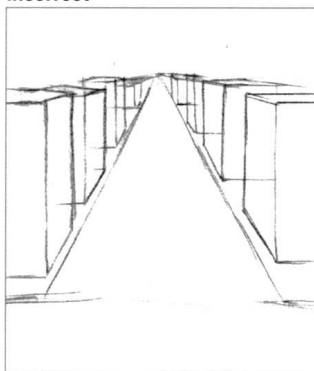
Uphill slope

Correct



Two different vanishing points were used for the slope and for the houses.

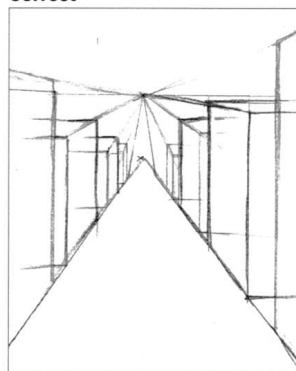
Incorrect



Using the same vanishing point for the houses as for the slope makes the scene appear merely drawn from a high angle rather than an uphill slope.

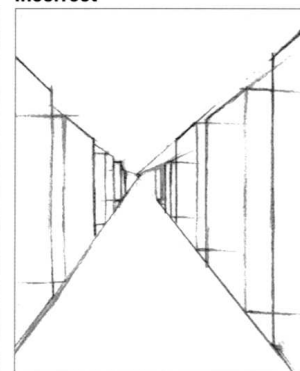
Downhill Slope

Correct



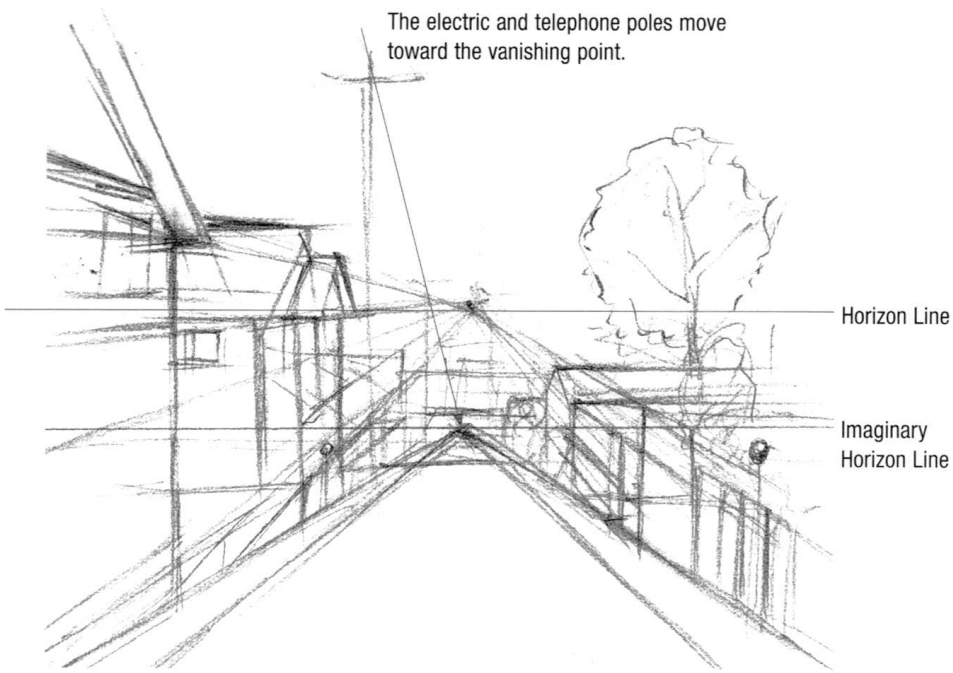
The above shows the slope and the houses drawn with different vanishing points.

Incorrect



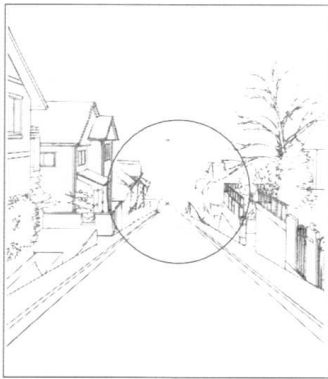
Using the same vanishing point for the houses as for the slope makes the scene appear merely drawn from a neutral position. The road appears level.

The electric and telephone poles move toward the vanishing point.

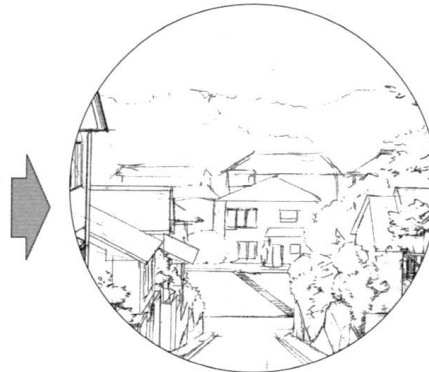


Draw a vertical line connecting the two vanishing points. Make sure that the vertical line lies perpendicular to the horizon line.

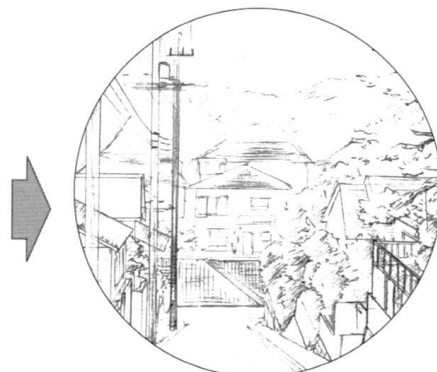
Draw the houses' depth lines moving toward the vanishing point positioned along the horizon line.



Have most of the objects close to the picture plane finished before proceeding to objects in the background.

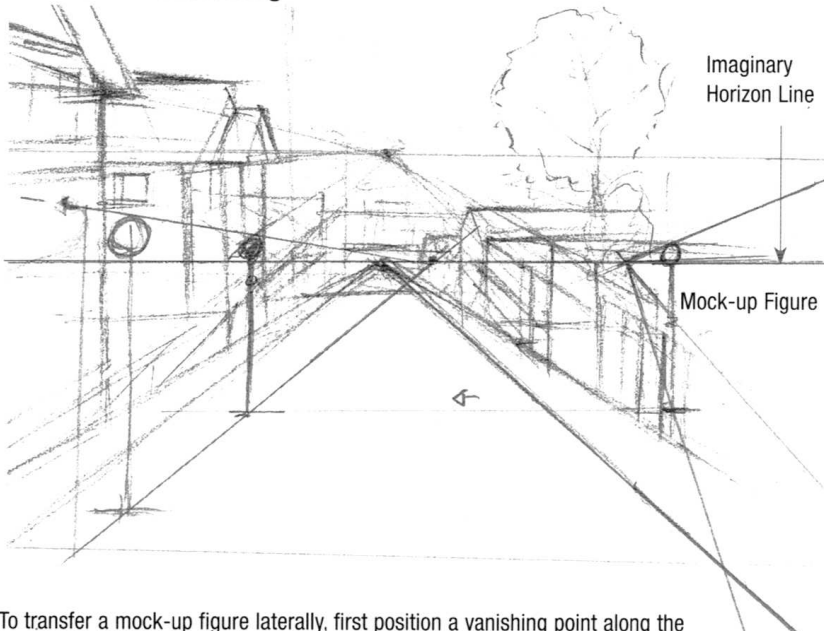


If the objects farthest in the background are made too light, then the overall composition will appear hazy.



Adding hatching and darkening the background objects a little reinforces the composition's sense of depth and pulls it together.

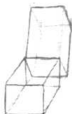
● Positioning Characters: Mock-up Figures and Lateral Transferring



To transfer a mock-up figure laterally, first position a vanishing point along the imaginary horizon line.

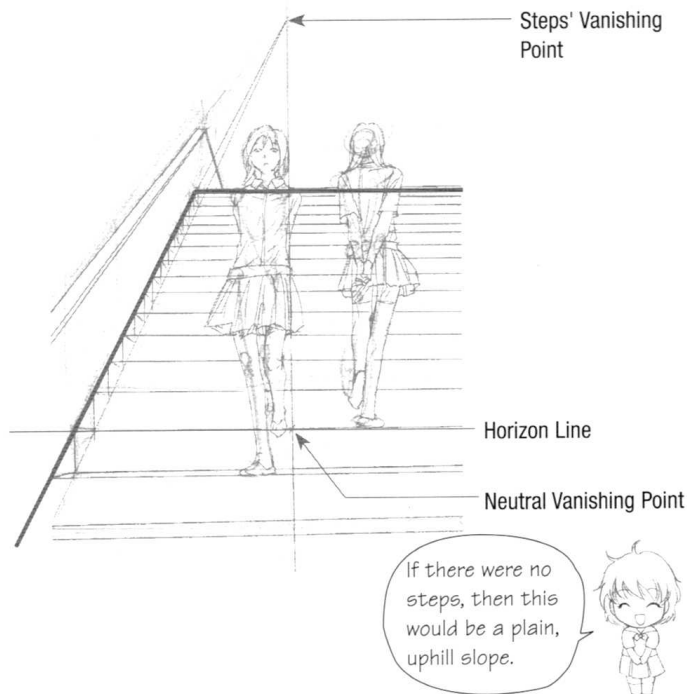


Steps

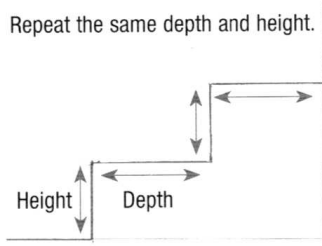
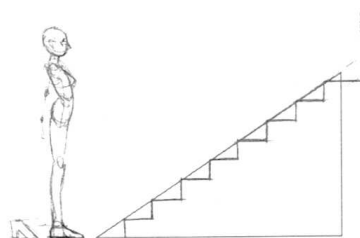


Apply the same process for drawing an uphill slope. Draw the scene in one-point perspective, using two vanishing points located one above the other.

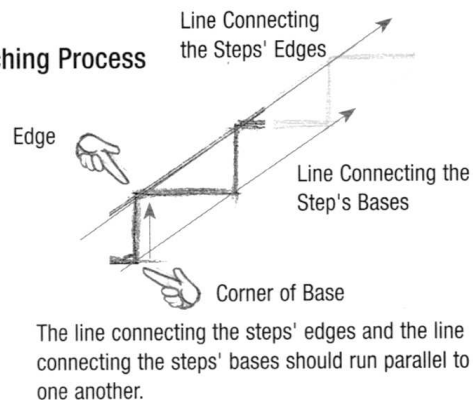
Upward Steps



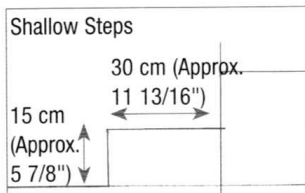
● Steps Fundamentals



The Sketching Process

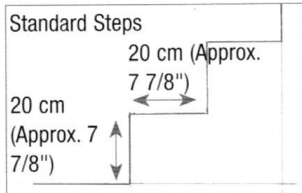
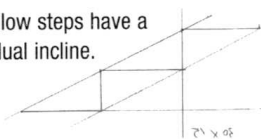


Two Types of Steps: Standard and Shallow



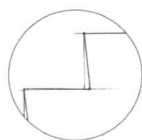
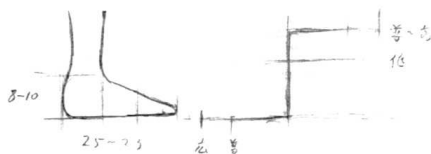
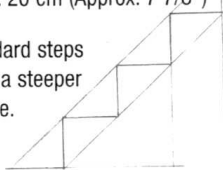
Height: 15 cm (Approx. 5 7/8");
Depth: 30 cm (Approx. 11 13/16")

Shallow steps have a gradual incline.



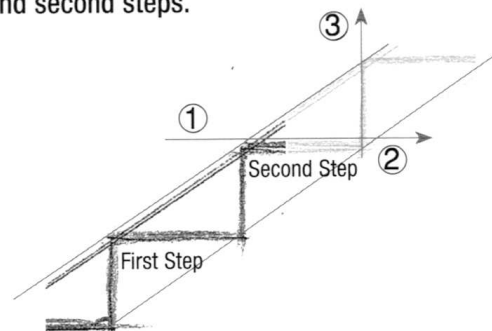
Height: 20 cm (Approx. 7 7/8");
Depth: 20 cm (Approx. 7 7/8")

Standard steps have a steeper incline.



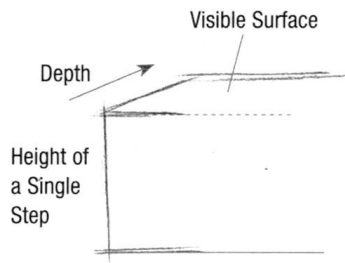
In real life, each step's base slants downward. But, go ahead and use flat, horizontal bases when you draw them.

The first and second steps serve as a basis for drawing the remaining steps. Sketch two lines connecting the edges and bases of the first and second steps.



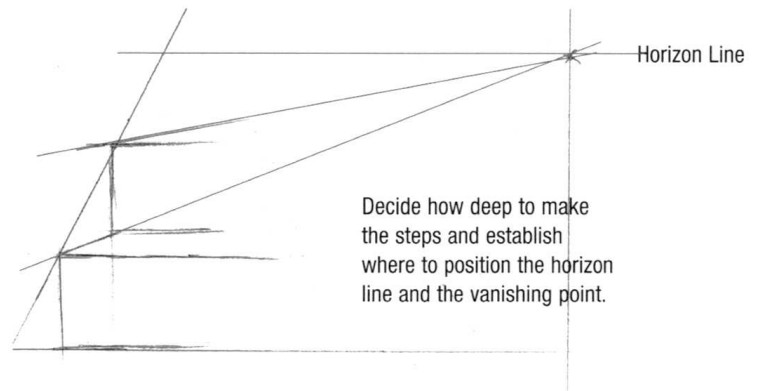
- ① Draw a horizontal line from the edge.
- ② This horizontal line should intersect with the line connecting the two steps' bases.
- ③ Draw a vertical line from this point. This creates a third step.

Establishing the Appearance of a Given Step

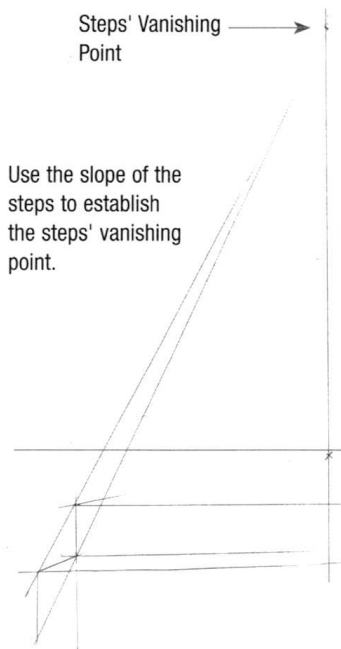


Sketch a step showing the height, depth, and the visible surface.

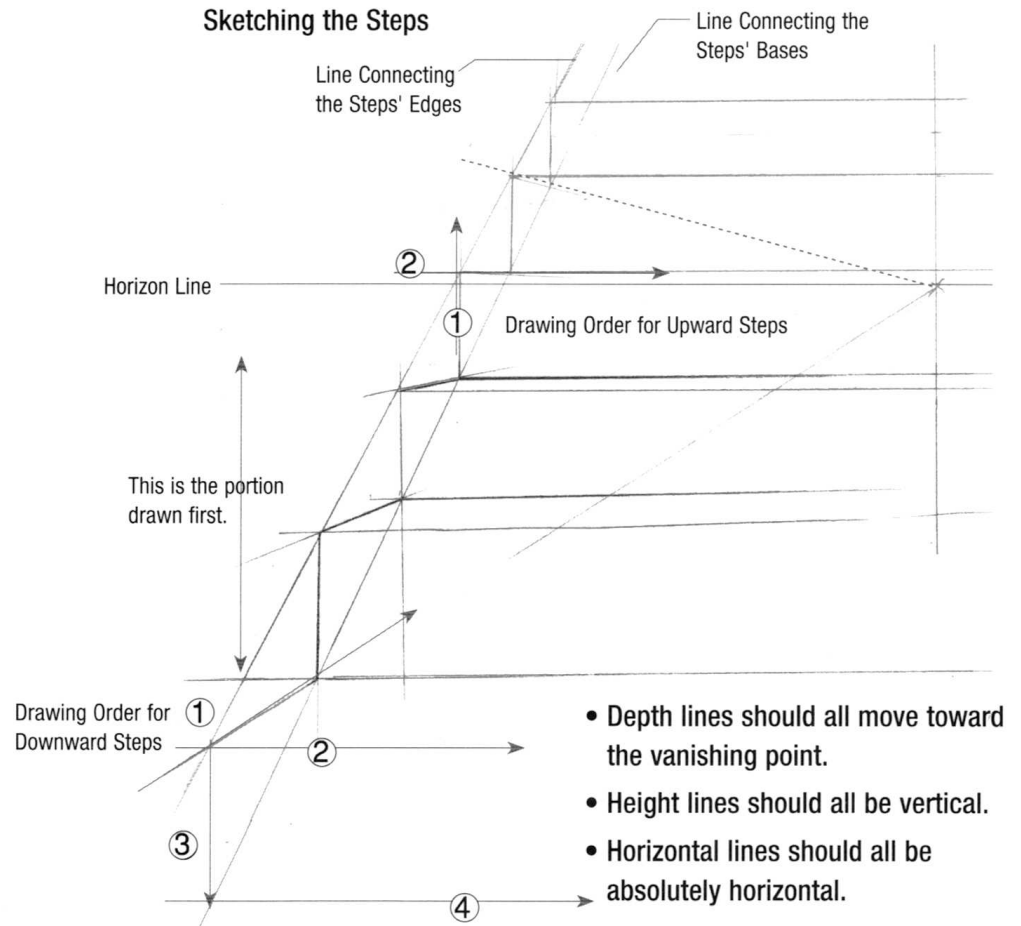
Using the Steps' Depth to Establish the Horizon Line and the Vanishing Point



Using the Slope to Establish the Steps' Vanishing Point

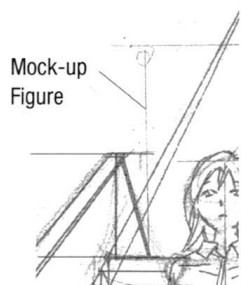


Sketching the Steps

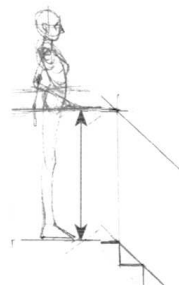


- Depth lines should all move toward the vanishing point.
- Height lines should all be vertical.
- Horizontal lines should all be absolutely horizontal.

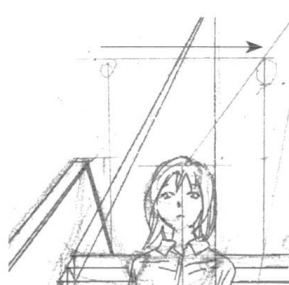
● Positioning Characters: Lateral Transitioning and Mock-up Figures



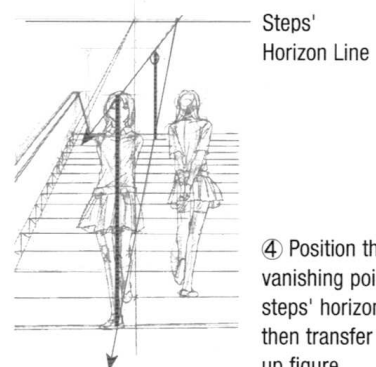
① Position the mock-up figure next to the banister.



② The banister should rest slightly above groin-level.



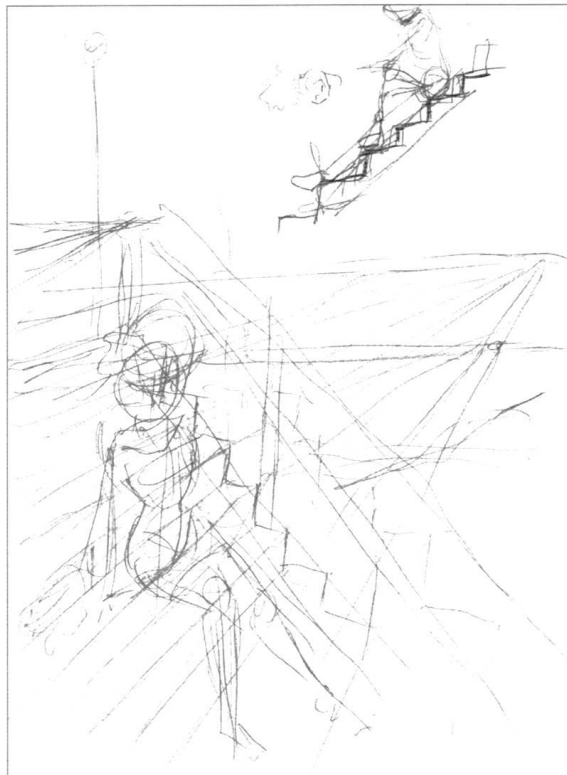
③ Transfer the mock-up figure laterally.



④ Position the figures' vanishing point along the steps' horizon line and then transfer the mock-up figure.

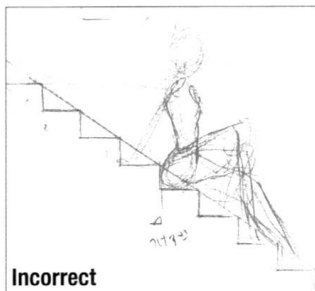
Downward Steps

1. Using a Rough Sketch to Establish the Character's Pose



Rough Sketch

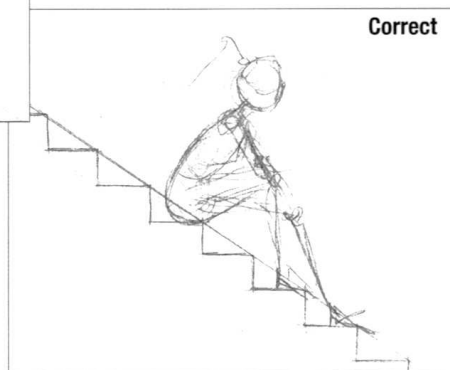
Let's use what we have learned so far about drawing sloped roads and steps to try drawing a staircase from a high angle.



Incorrect

The above shows an attempt to replicate the atmosphere of the rough sketch. However, the figure is seated with her posterior pressed all the way against the step's back, resulting in an unnatural pose.

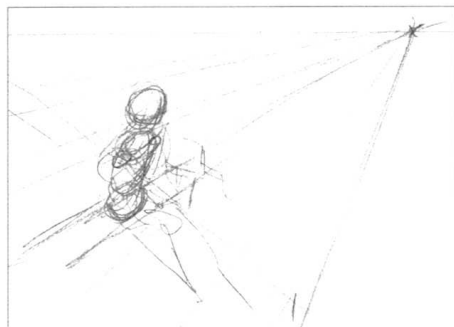
First, let's draw the character in profile. This will visually clarify the relationship between the step's back and the character's posterior.



Correct

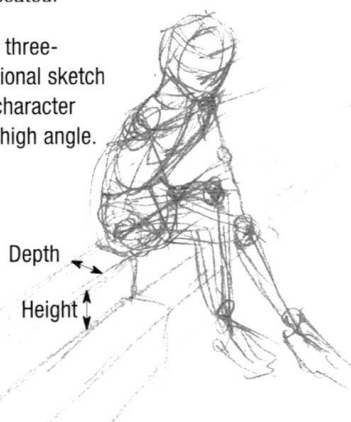
Here, the character is sitting on the step's base in a more natural pose.

2. Sketching the Steps and the Character

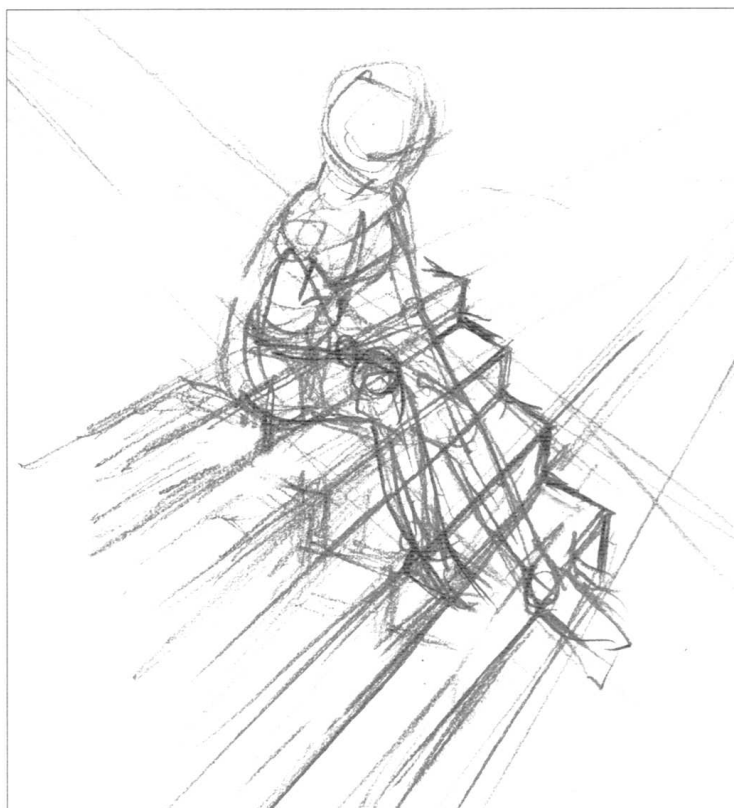


Now let's produce a rough sketch, while keeping in mind where the horizon line and the vanishing point are located.

Draw a three-dimensional sketch of the character from a high angle.

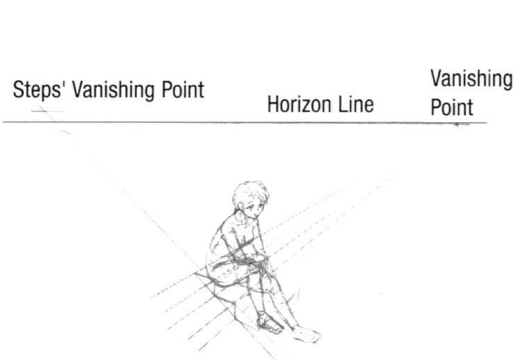


This will solidify how high and deep each step should be.

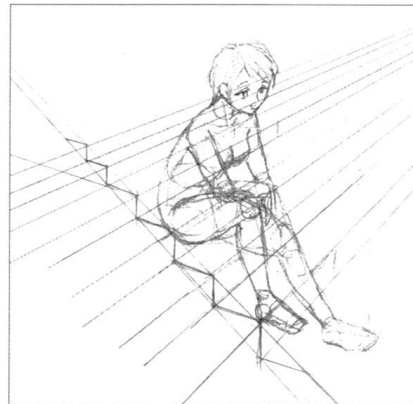


In the sketch above, each step's depth, the stair's slope, the character's pose, and other major factors have been solidified for the most part.

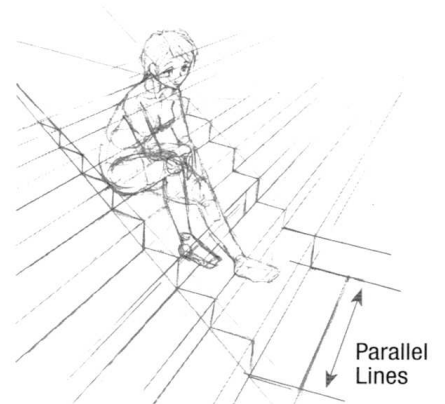
3. Sketching Process Pitfalls



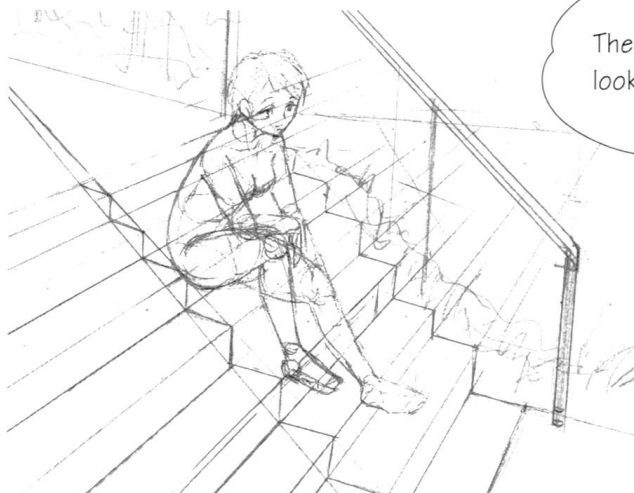
For the above, let's say after first establishing the horizon line's location, we then position the steps' vanishing point above the horizon line and according to the angle of composition.



We use two vanishing points as we sketch. We want to preserve the correct positions of the character's feet and the surface on which she sits, so we draw the front step first and then proceed to the remainder.



We draw zigzag lines to define the ends of the steps. We make sure that the depth lines lie parallel to each other.

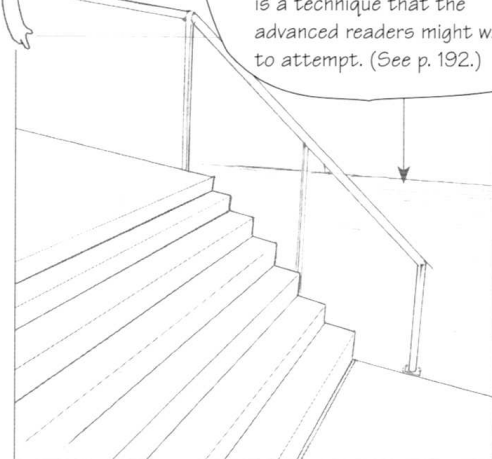


We sketch the banister. But, now that we have almost finished, we notice that something does not look right. The top step looks disproportionately narrow.

The top step looks funny.

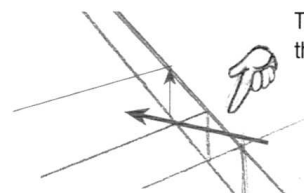


This distorted perspective is for advanced artists. In the panel shown, the artist intentionally used an oblique horizon line and drew the steps as if looking down from a wide-angle lens. It is a technique that the advanced readers might want to attempt. (See p. 192.)



The artist who drew the panel above decided to play around and redraw the steps. The artist made a serious effort to establish the steps' vanishing point correctly, but something still went wrong. It looks like the steps' vanishing point is too high.

Not only did the artist goof up when drawing the steps' depth lines, but the artist also mistook depth lines for height lines.



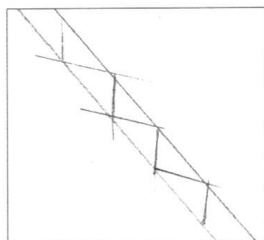
The artist should have drawn the steps like this.



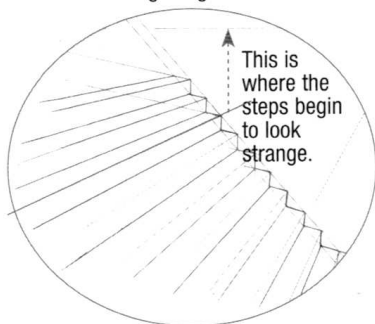
Make sure that you don't rush when you draw.

Challenge from Artist H

4. Attempt No. 2



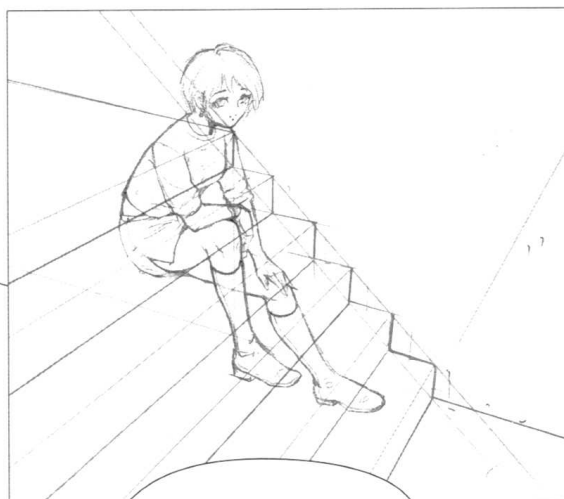
Artist: "To see how things work out, I drew two parallel lines connecting the edges and bases of the steps." This is because if the perspective is not overly complicated, then the composition will work out well simply drawing these as parallel lines, even when the steps are drawn from a high angle.



Let's draw the steps again, leaving the vanishing point in its original position.

The steps take on a distorted form toward the top.

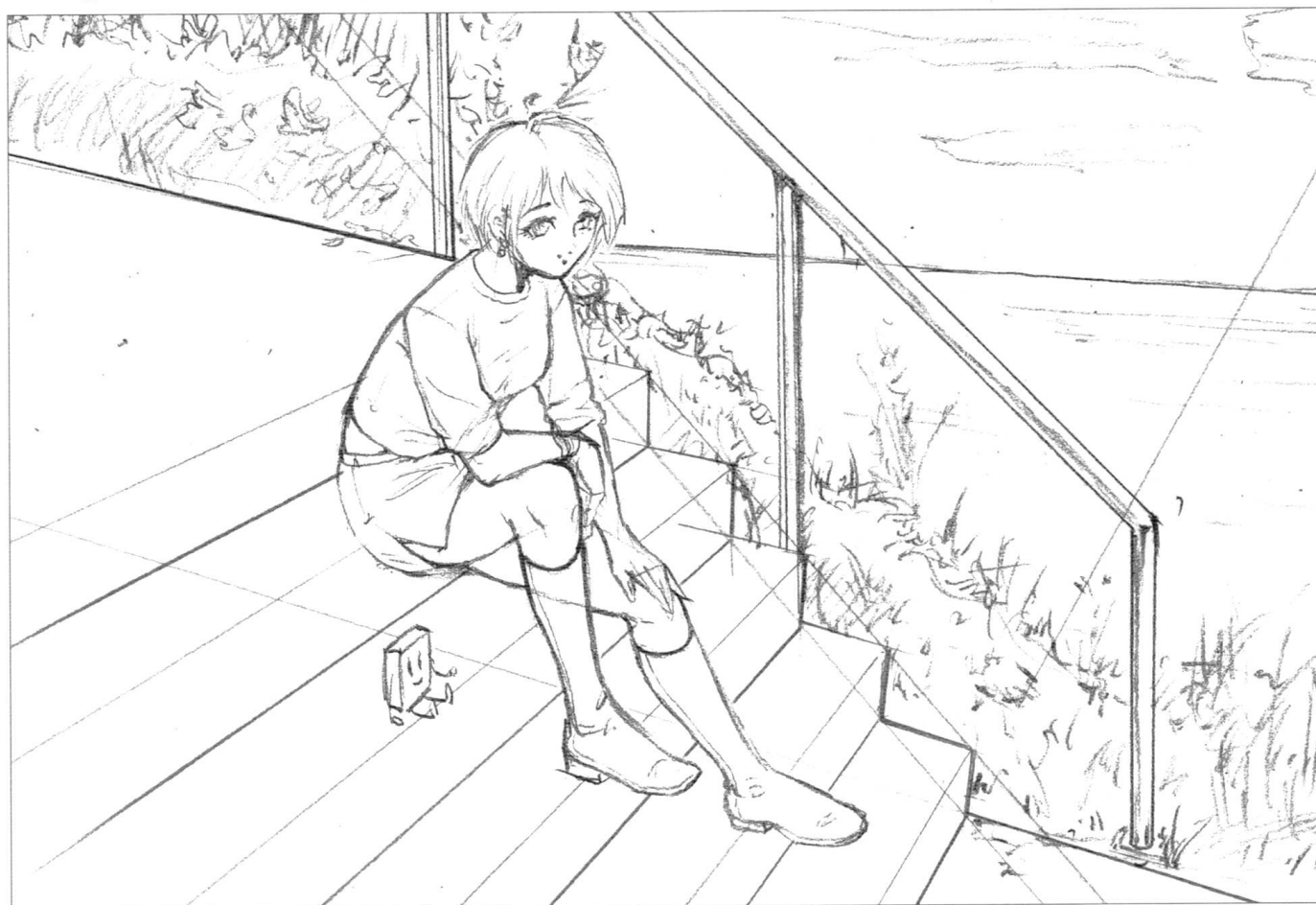
Horizon Line



Now that there are fewer steps, the composition looks better.



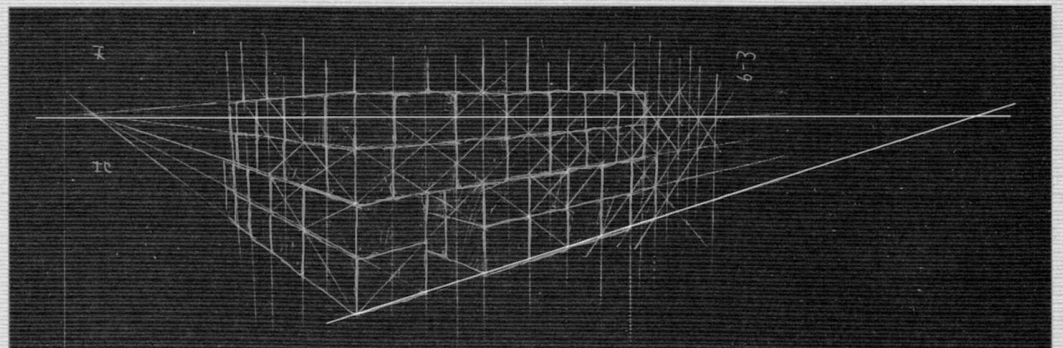
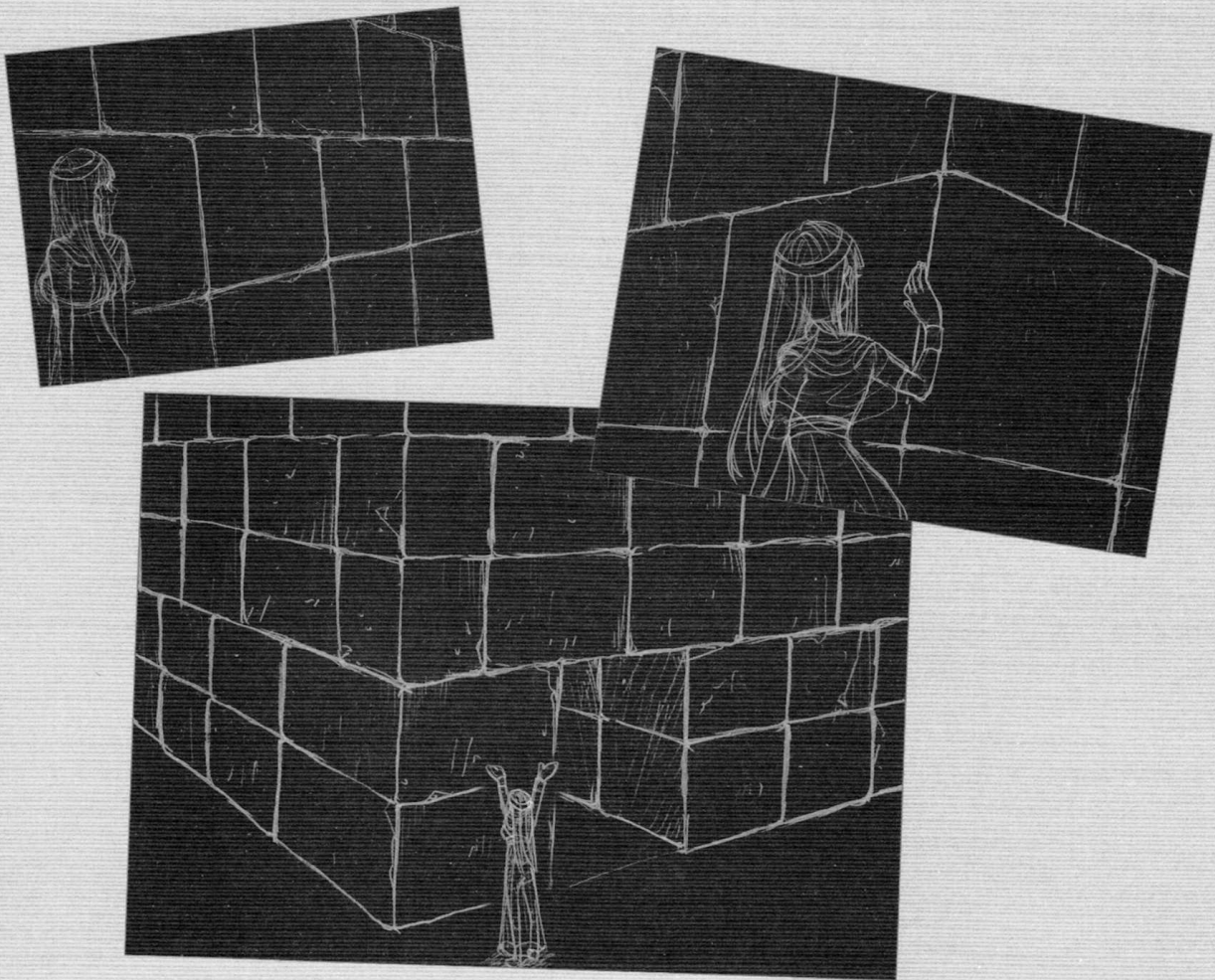
Drawing the Details and Finishing up



Add the banister and the background to finish.

Chapter 2

Two-Point Perspective for Practical Composition Creation

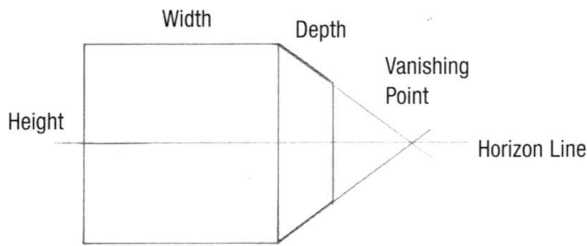


The Basics of Two-Point Perspective

Using two vanishing points increases the number of diagonal lines, which accentuates the sense of an expanding space or object as well as enhancing the illusion of three-dimensionality.

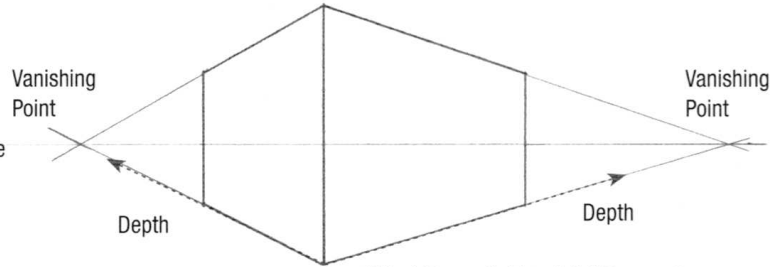
Differences between Solids Drawn in One-Point and Two-Point Perspective

All lines are diagonal (i.e. are depth lines), except for the height lines.



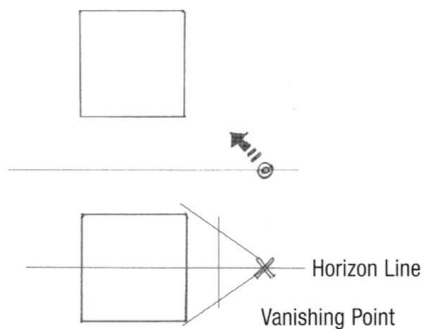
Object Drawn in One-Point Perspective

- There is only one vanishing point.
- One surface is rendered using diagonal lines to evoke a sense of depth.

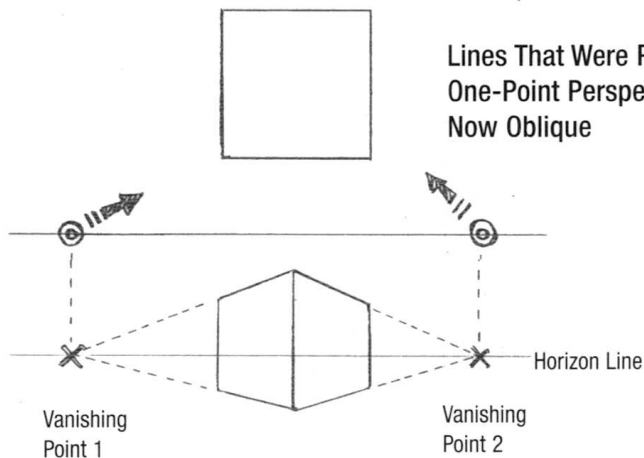


Object Drawn in Two-Point Perspective

- There are two vanishing points.
- Two surfaces are rendered using diagonal lines, which heightens the sense of depth.
- It is difficult to distinguish between the width and depth lines.

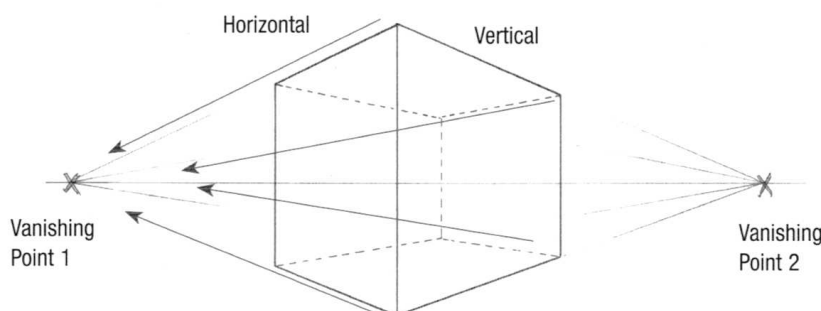
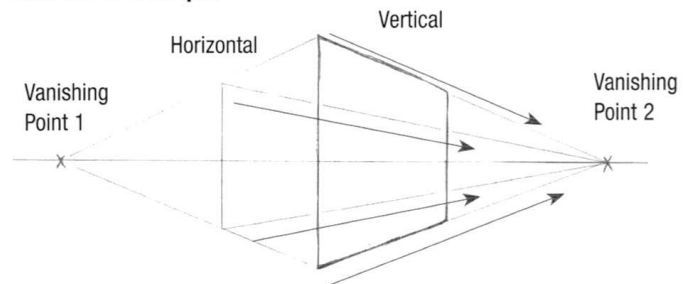
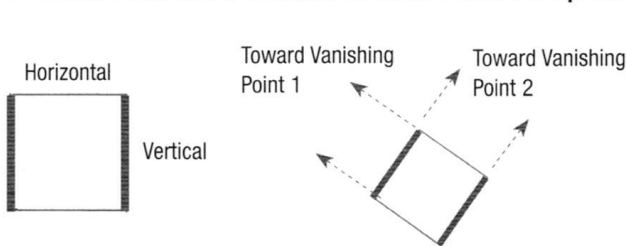


One-point perspective uses one vanishing point. The viewer easily discerns the object's original shape.

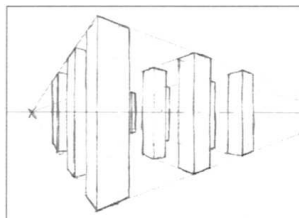


Lines That Were Parallel in One-Point Perspective Are Now Oblique

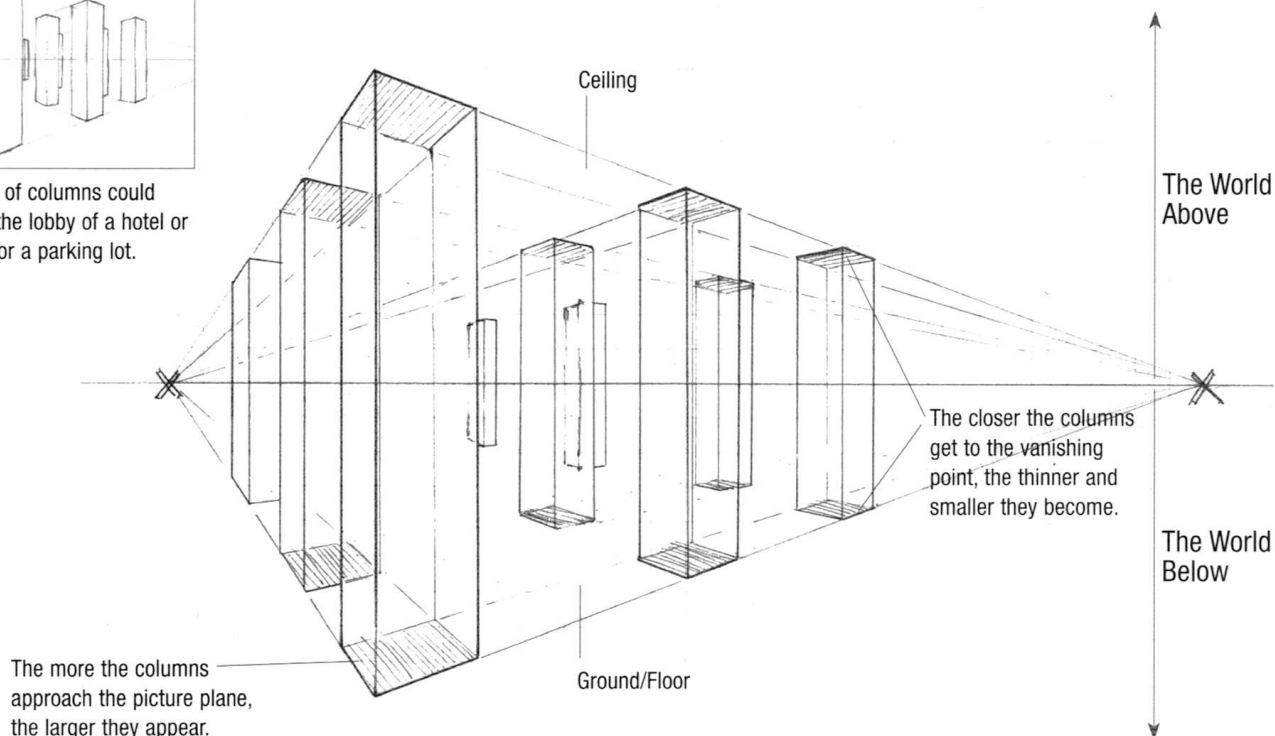
● Lines That Were Parallel in One-Point Perspective Are Now Oblique



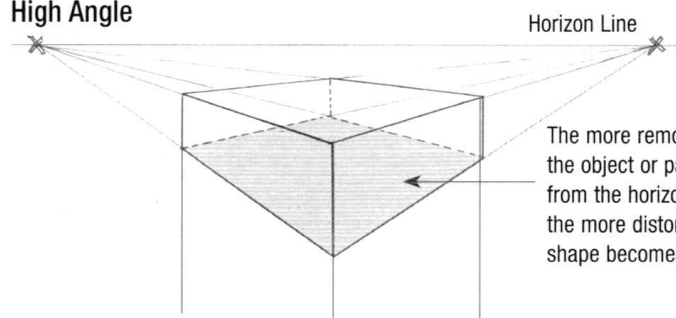
The World Above and the World Below



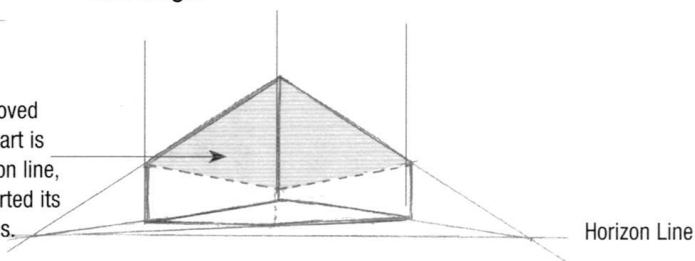
This forest of columns could appear in the lobby of a hotel or event hall or a parking lot.



High Angle



Low Angle



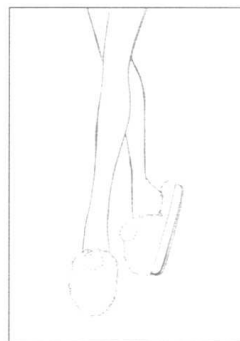
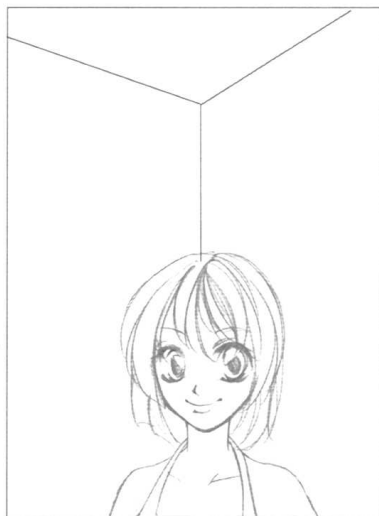
● The "Y Effect": A Handy Technique in *Manga*

Using two-point perspective to differentiate the world above from the world below allows you to create a space easily.

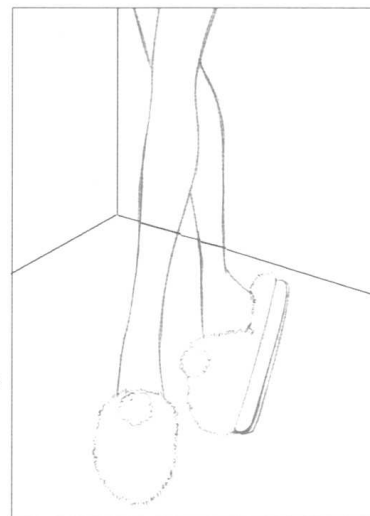


The above panel shows only the character and has a blank, boring background.

The "Y effect" entails adding two diagonal lines and one straight line. This creates the illusion of a ceiling and walls.



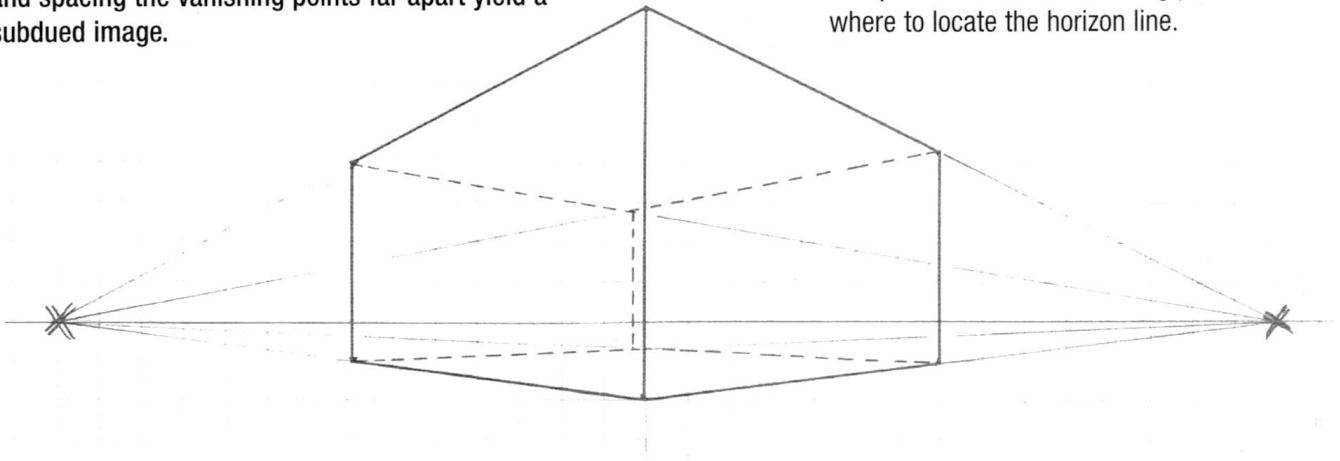
Using an "upside-down Y effect" produces walls and a floor.



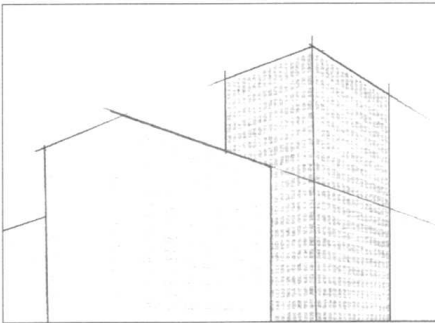
Tips for Drawing Buildings in Two-Point Perspective

Positioning the horizon line low in the composition and spacing the vanishing points far apart yield a subdued image.

When using two-point perspective, Artists often fall into the trap of using overly sharp angles to draw solid objects, which makes these objects appear unnatural. So, take extra care in establishing how far apart to make the vanishing points and in where to locate the horizon line.

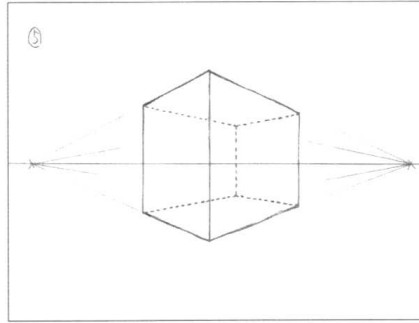


Correct



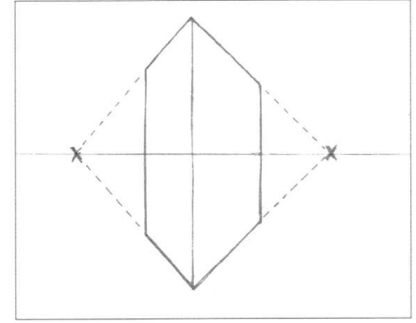
These buildings have well-balanced silhouettes.

Acceptable

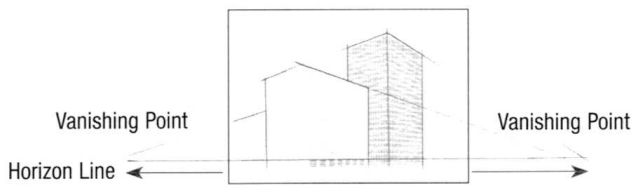


The horizontal line is centered on the composition.

Incorrect



The vanishing points are too close.

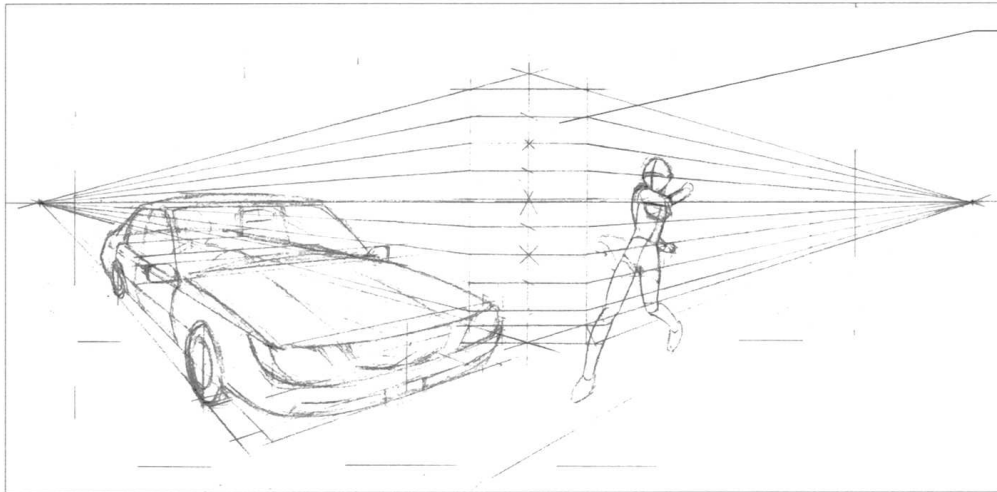
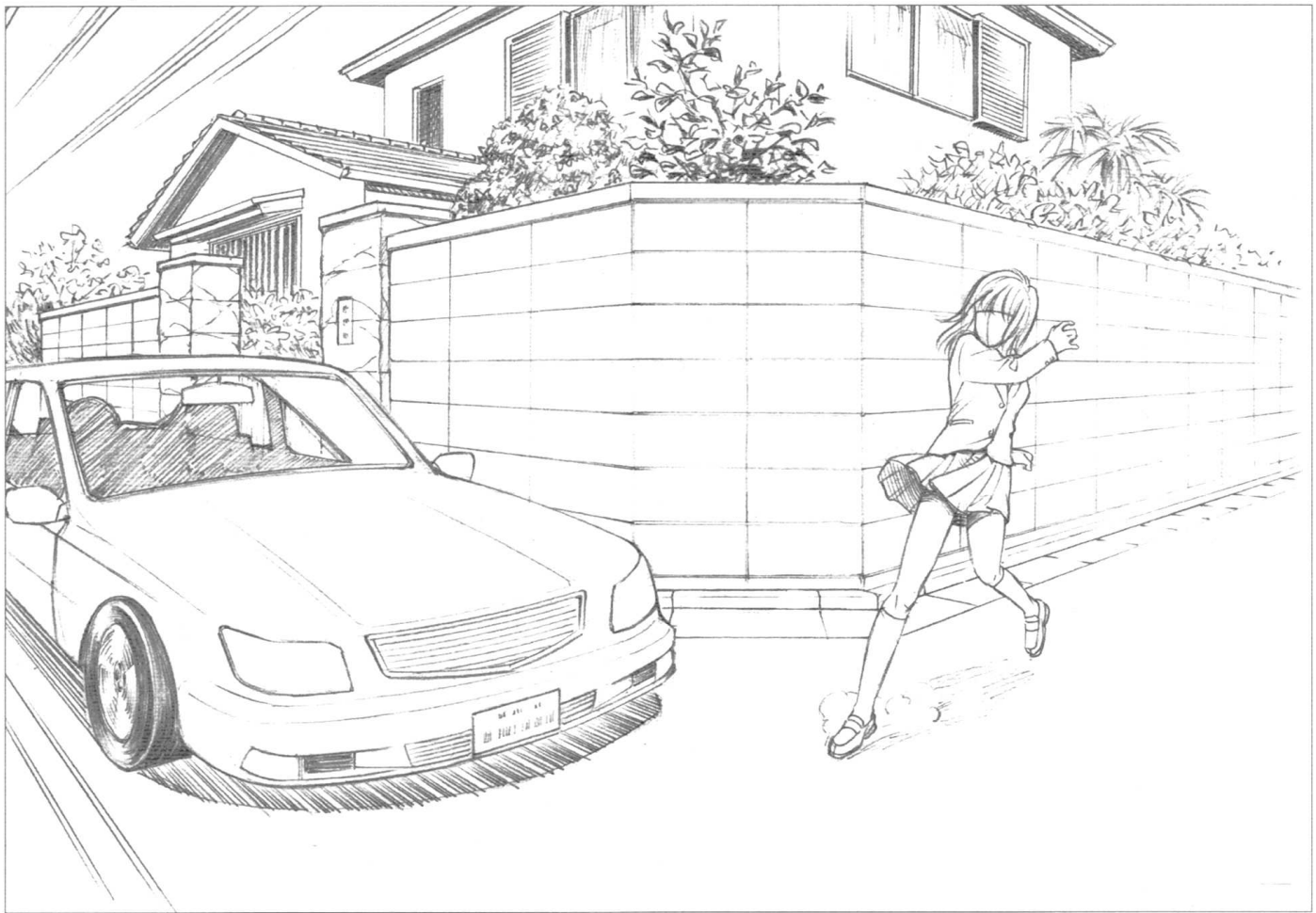


If you go ahead and draw the vanishing points in easily accessible positions, owing to the sketch paper's size, then you may experience difficulty achieving the effects you desire. You should consider adding extra sheets of paper to expand your drawing space and keeping a long straightedge on hand.

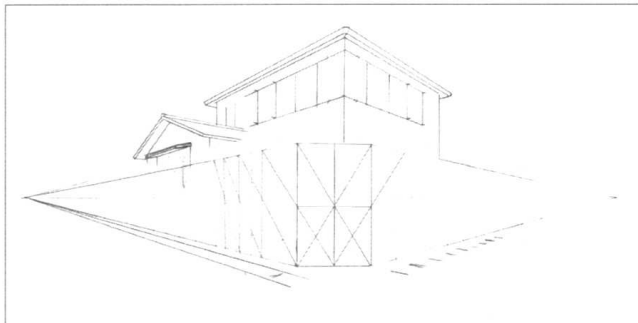
Good Examples of Application

Large House Drawn in Two-Point Perspective

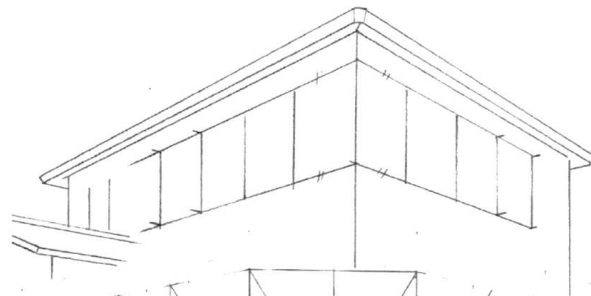




The artist made a point of flattening this corner. This causes the composition to expand in a natural manner.



While the top of the house does not appear in the final composition, the artist drew it in the preliminary sketch. Failure to include hidden areas in the preliminary sketch could result in that object appearing awkward in the final composition.



The above shows the prototypical two-point perspective building silhouette.

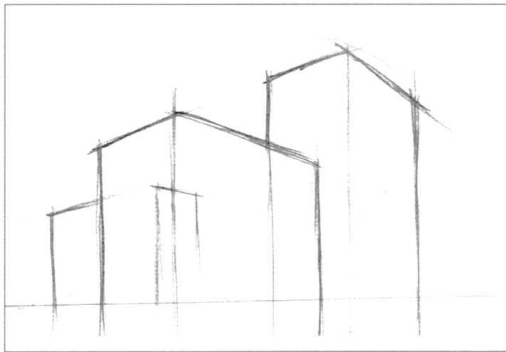
Drawing Architectural Structures

This section covers how to draw using two-point perspective buildings, streets surrounding buildings, and building interiors that have depth and expanse.

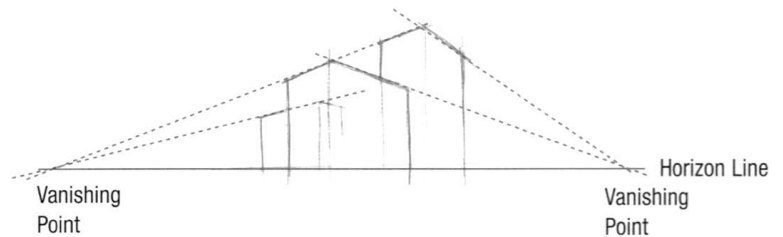
Drawing Buildings and Houses

Architectural structures are essentially boxy in shape.

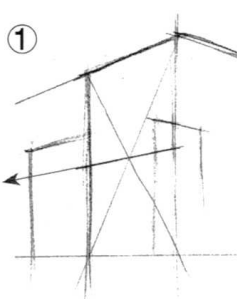
Buildings



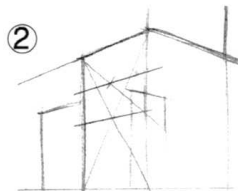
Position the two vanishing points far apart.



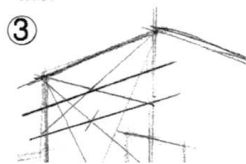
● The Key Point to Drawing Buildings Lies in Equidistant Floor Spacing: Use the "X Method"



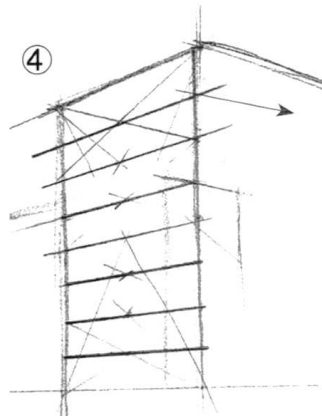
First, divide one surface into two parts. The line dividing the surface into half should move toward a vanishing point.



Divide the upper half into two.



Once again, divide it into two.



Now you have divided the entire surface into eight equal parts. This yields the basic form of an eight-story building.

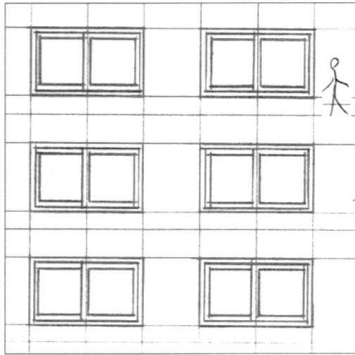


After dividing up each story equally, use the "N method" to ensure that the windows and the spaces in between are all uniform.

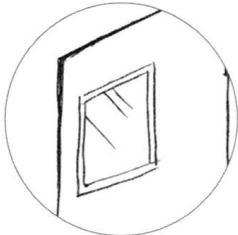
Windows Constitute a Building's Face

● Buildings with Little Windows

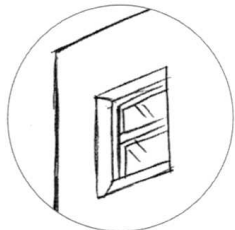
Little windows appear frequently in small and old buildings.



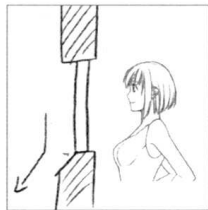
Each window pane is approximately enough to see the upper body of a human figure.



Windows with Frames Lying Flush against the Building's Walls

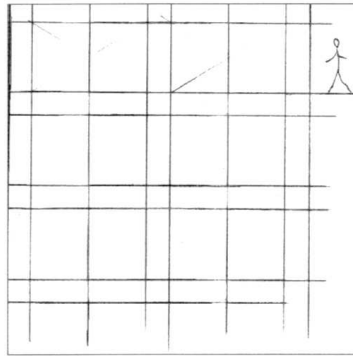


Windows with Recessed Frames



● Buildings with Big Windows

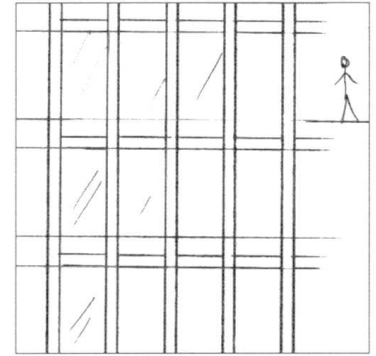
Big windows commonly appear in large and newer buildings.



Glass Curtain Façade



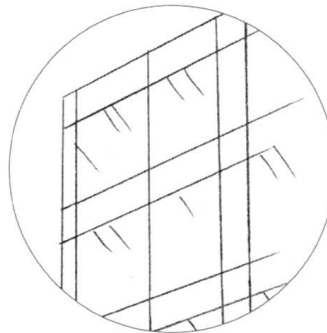
The windows' panes are larger than a person.



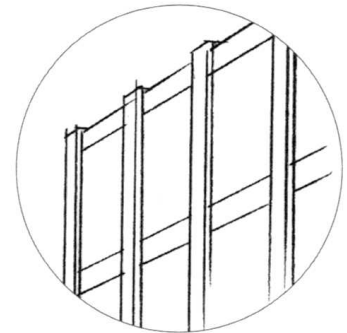
Glass and Concrete Façade



The windows' panes are significantly larger than a person.

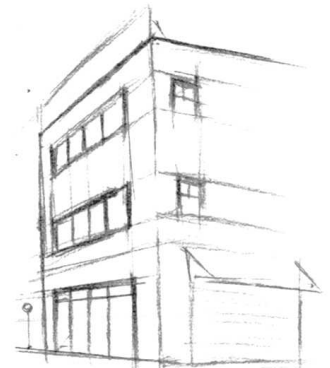
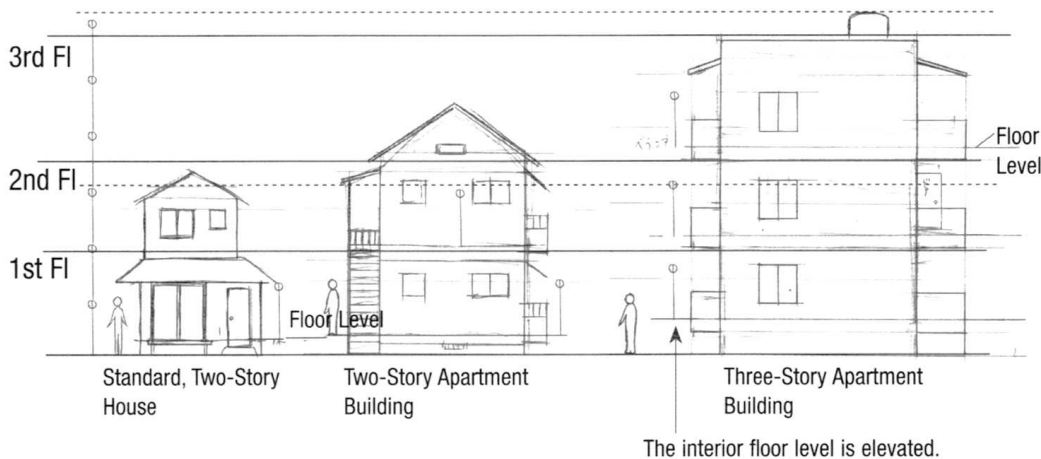


Glass Curtain or Mirror Façade



The windows are surrounded by narrow framing.

Using Mock-up Figures to Establish a Building's Scale

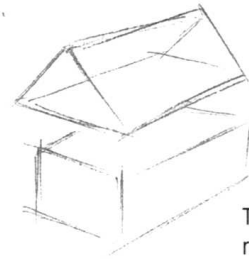


Often, buildings with three or more stories will have a different style of windows on the first floor.

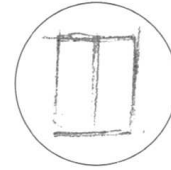
Drawing Houses I: One-Story Houses

These pages cover how to draw common gabled and hipped roofs.

● Houses with Gabled Roofs

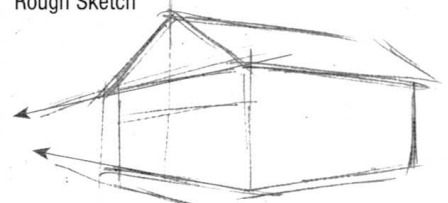


The house is a triangular roof mounted on a box.



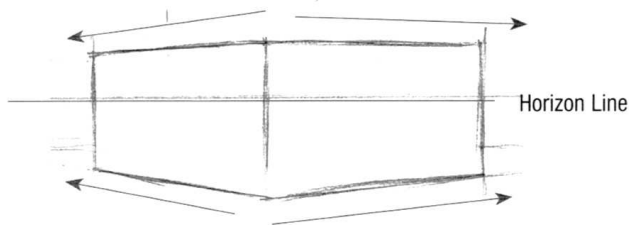
A directly overhead view shows that the roof looks like a rectangle with a line down the center.

Rough Sketch

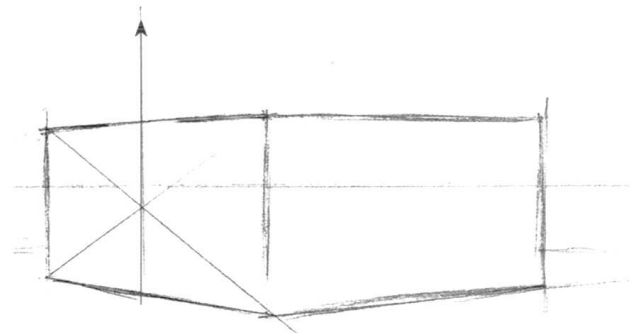


Underneath the roof lies a box. Make sure that you remain conscious of where the vanishing points (the horizon line) are located, even when producing a rough sketch.

Drawing the Base



Draw the house itself in two-point perspective.



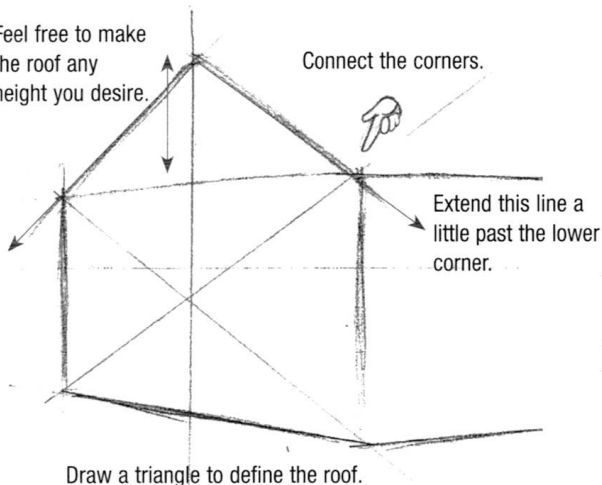
Locate the center using the "X method," and add a vertical line.

Drawing the Roof

Feel free to make the roof any height you desire.

Connect the corners.

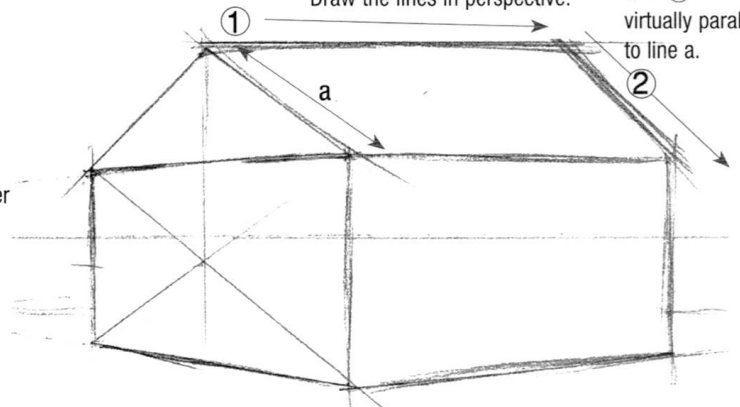
Extend this line a little past the lower corner.



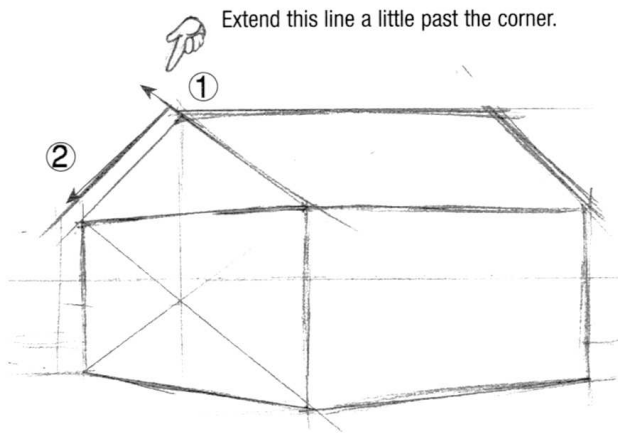
Draw a triangle to define the roof.

Draw the lines in perspective.

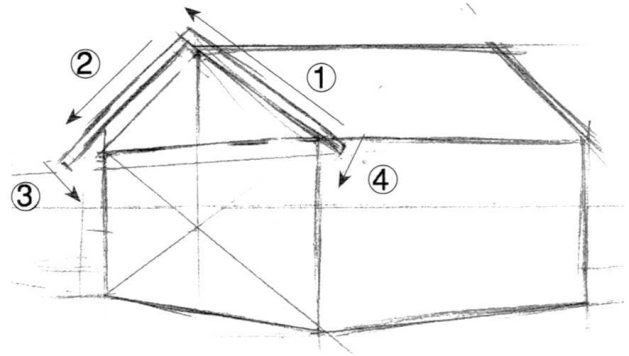
Line ② lies virtually parallel to line a.



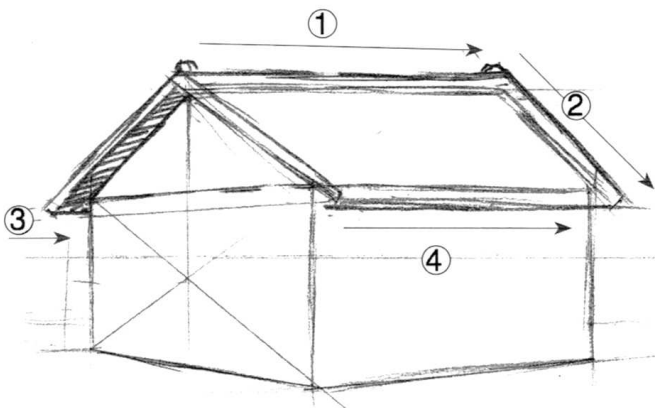
Sketch the roof's overall form.



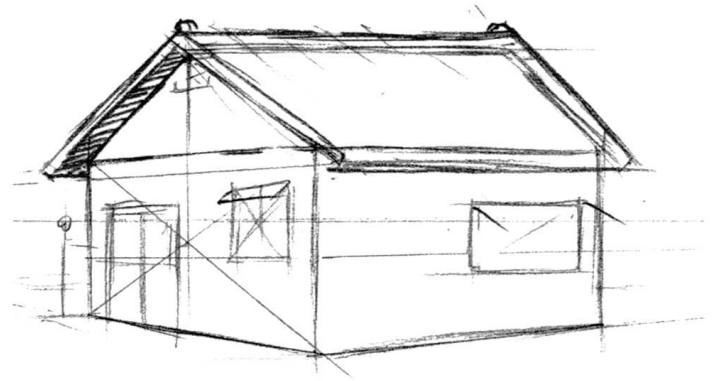
Sketch the roof's overall form.



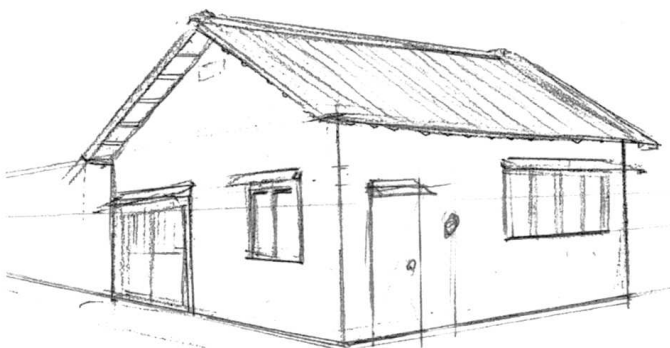
Give the roof thickness.



Add thickness to the entire roof.



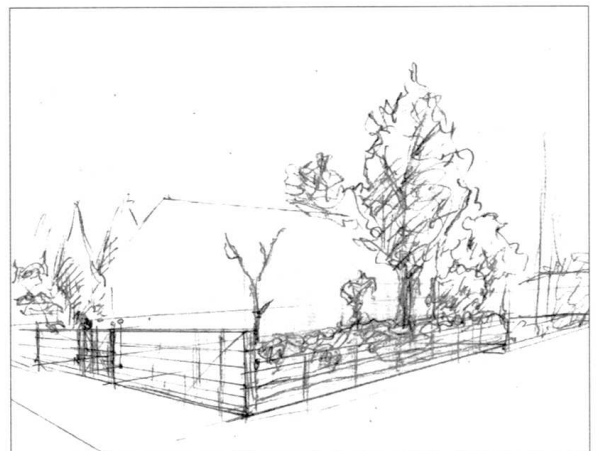
Use a mock-up figure to scale the entrance and windows.



Add a backdoor to finish.

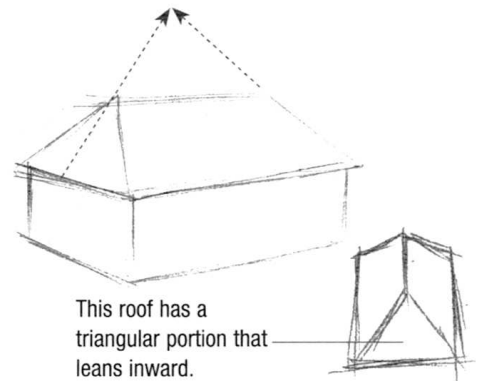
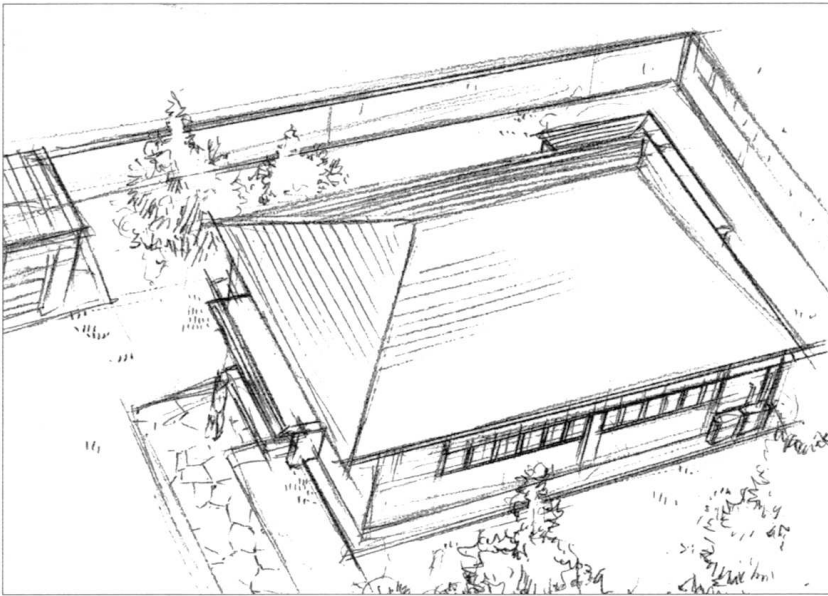


Mock-up Figure

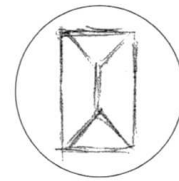


Draw the fence and wall surrounding the house in perspective as well.

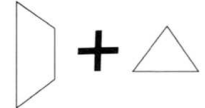
● House with a Hipped Roof



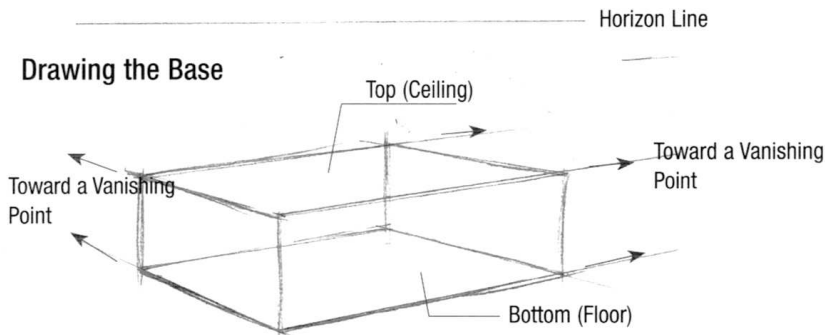
This roof has a triangular portion that leans inward.



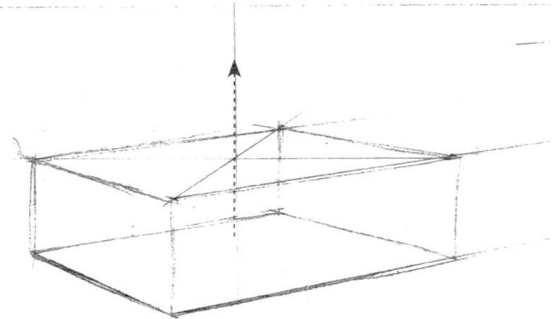
From directly overhead, this roof appears to be a combination of trapezoids and triangles.



Drawing the Base

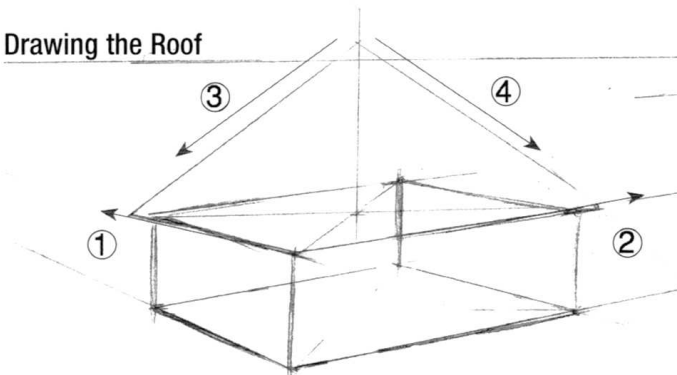


Draw the house itself in perspective. Ensure that you have drawn the top and bottom correctly.

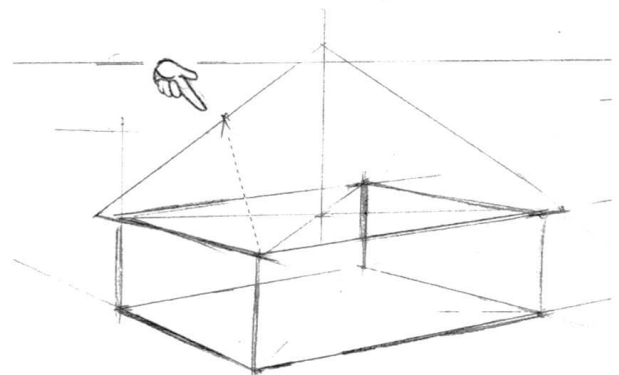


Using the "X method," locate the center of the top (or bottom) and draw a vertical line.

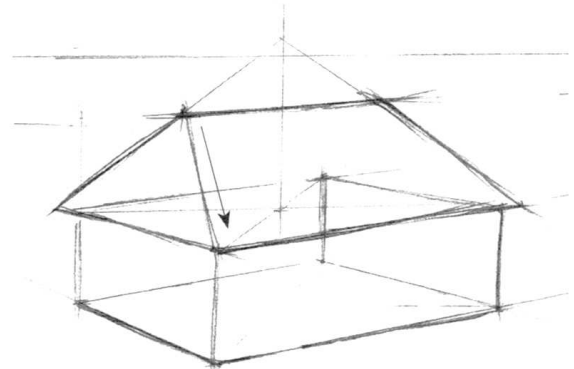
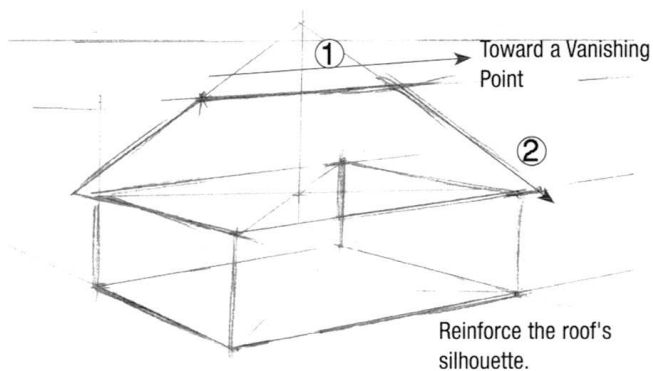
Drawing the Roof



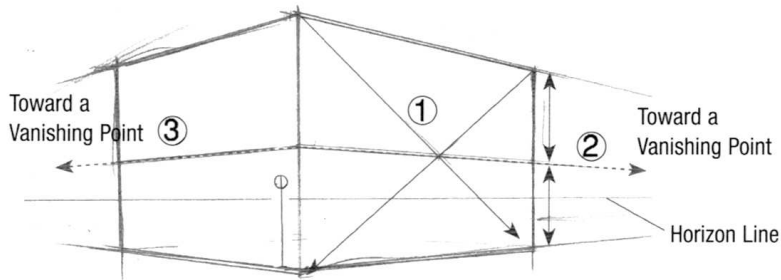
Extend the eaves at ① and ② and draw a triangle on top of the house.



Determine where the triangle's apex is located.

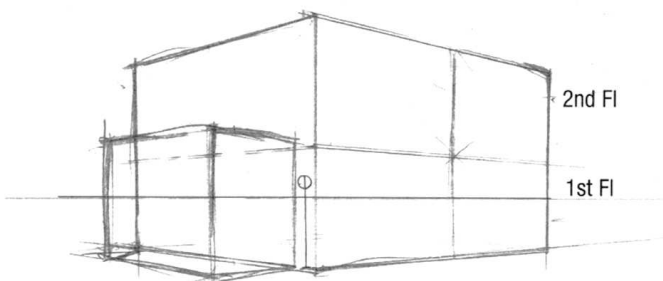


Add a triangle close to the picture plane to finish.

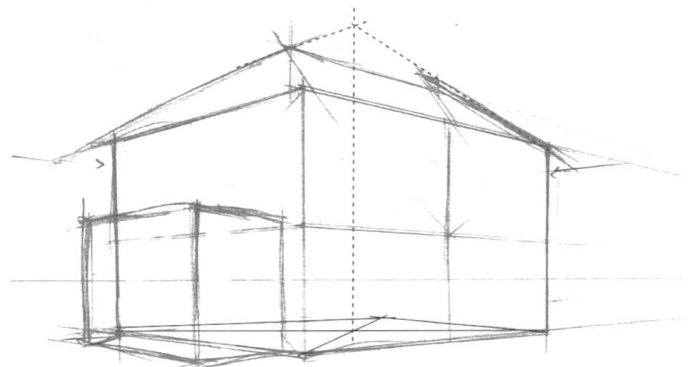


The two vanishing points are positioned far away from one another. However, this distance allows you to draw a base box that has a bold expanse and depth.

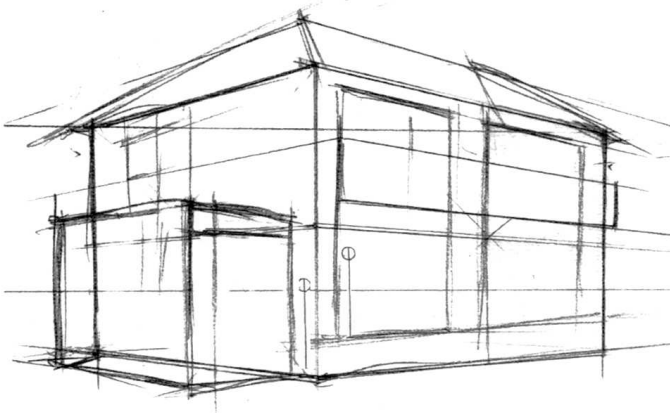
Draw a box to represent the house itself. Next, using the "X method," locate the center. This center line divides the house's second floor from the first floor.



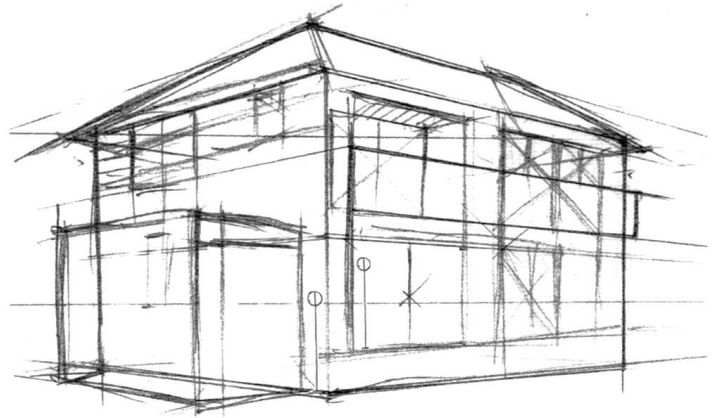
Using a mock-up figure for scaling, draw a box to represent the foyer.



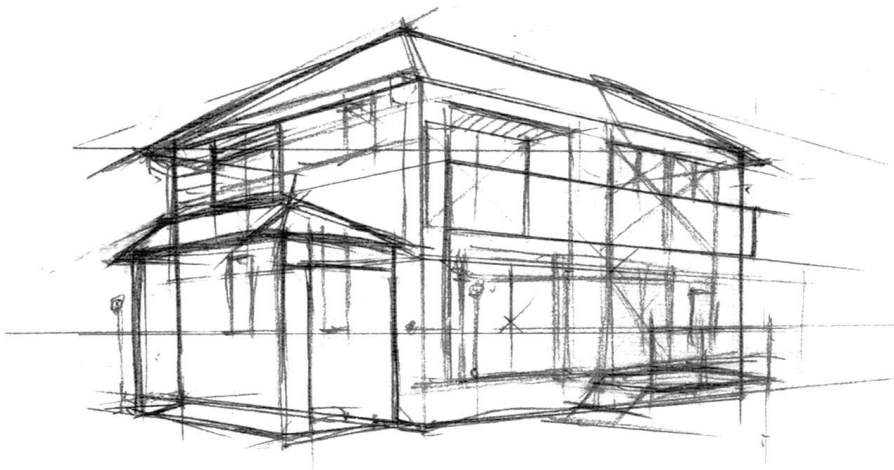
Locate the bottom's (floor's) center using the "X method," and draw a hipped roof.



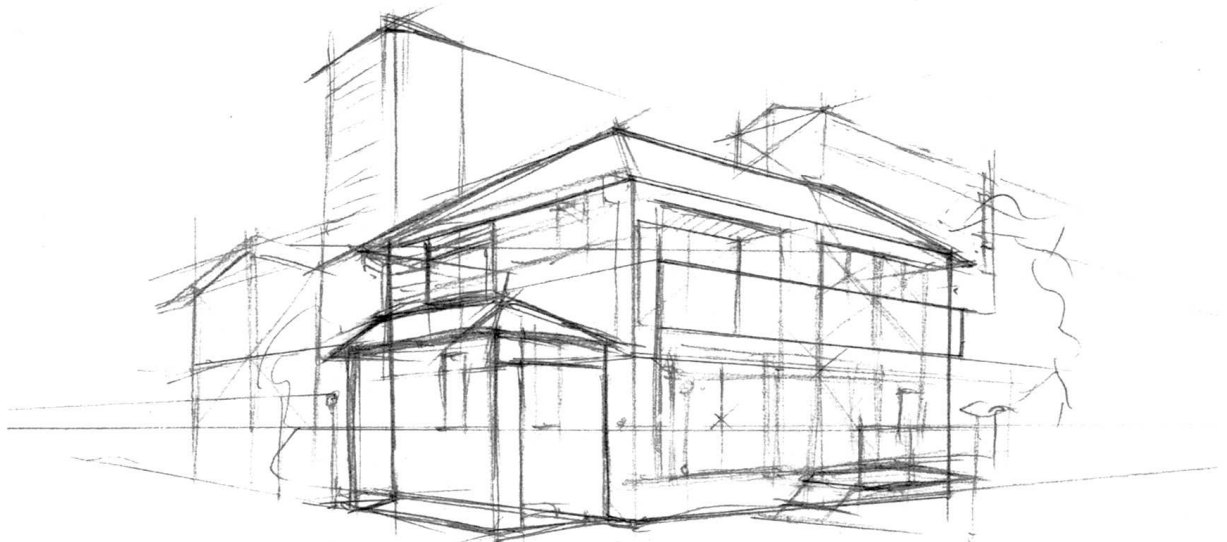
Draw the window frames, using a mock-up figure for scaling.



Use the "X method" to locate the windows' centers and divide them into two.



Add the outdoor patio and other details.



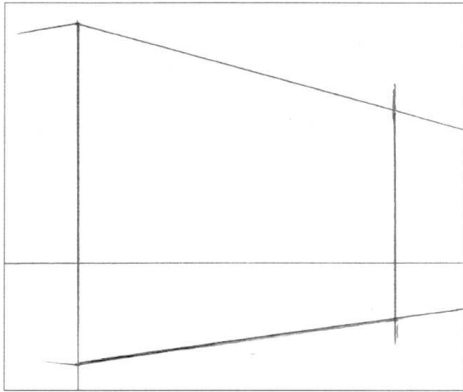
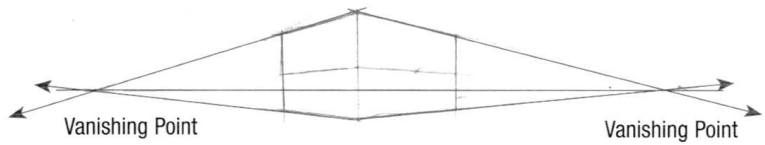
Draw the background buildings and houses in perspective, using the same vanishing points.

Positioning the Vanishing Points Far Apart

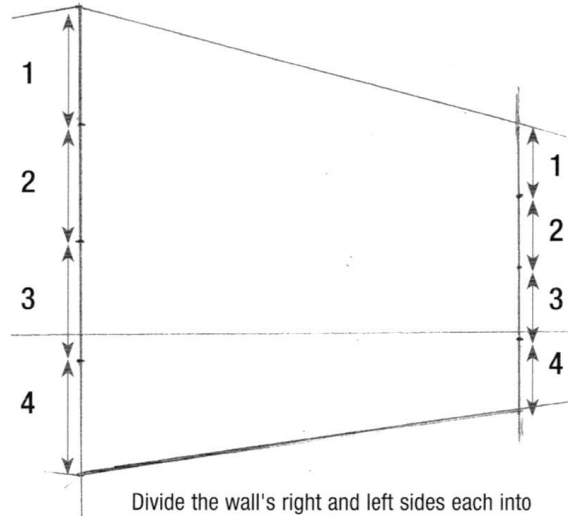
When drawing in two-point perspective, you will often need to position the two vanishing points far away from each other to achieve satisfying forms.



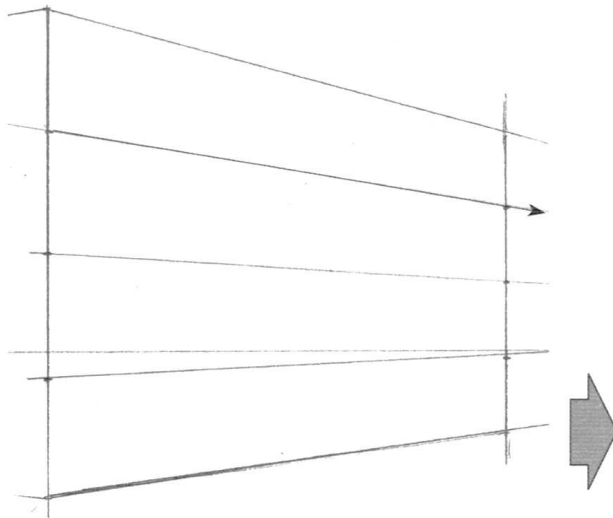
Often when drawing a large composition that entails adding extra sheets of paper, you find the paper lying off the desk's edge or that your straightedge just is not long enough and a host of other problems. Here we will resolve a few.



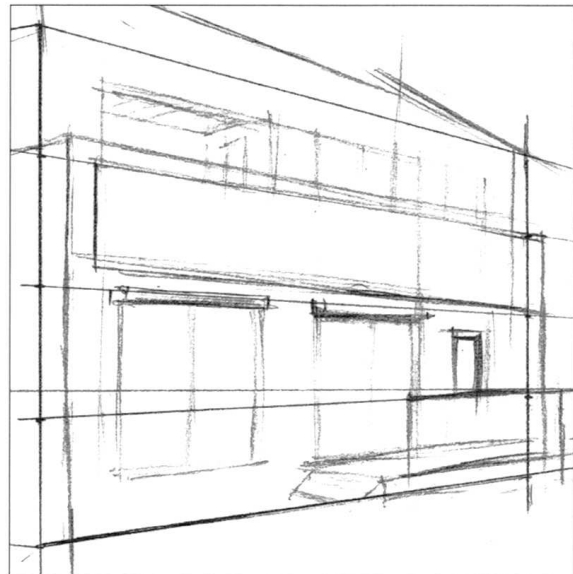
Draw one surface (wall) in the perspective you will use for the composition.



Divide the wall's right and left sides each into equal parts. Aim for four to five parts.



Connect the corresponding points on the right and left sides. Use these lines as guides to enable you to make the house's components uniform when you draw their lines toward the vanishing points.

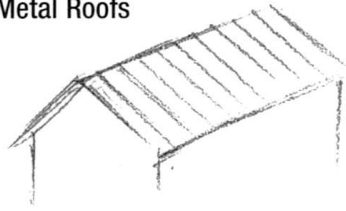


This isn't drafting.
So just relax and
draw!



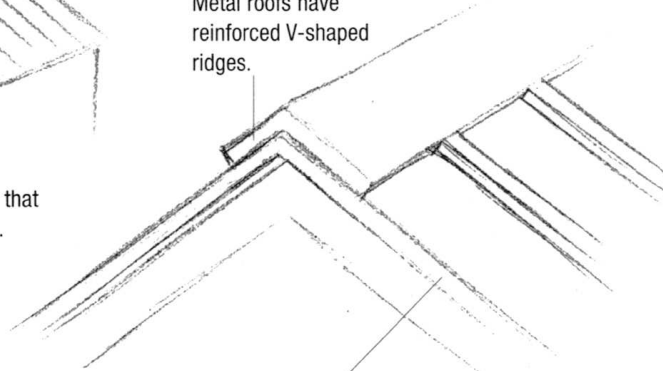
Assorted Roofs

Metal Roofs

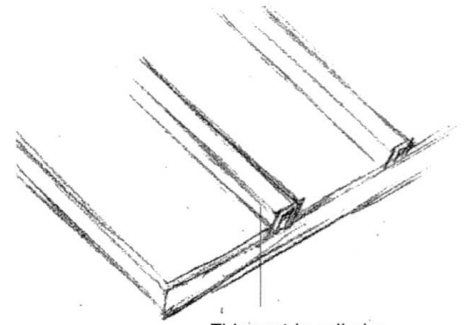


Use parallel lines to achieve that distinctive "metal roof" look.

Metal roofs have reinforced V-shaped ridges.

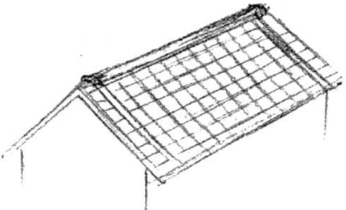


This should be a straight line.



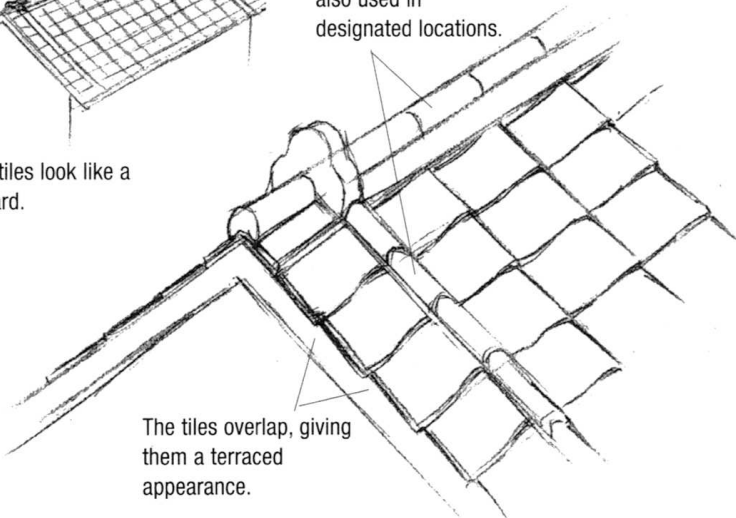
This part is called a "standing seam." Draw the seam to look like a rectangular pole.

Clay Tile Roofs

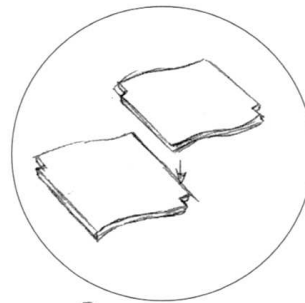


The roof tiles look like a chessboard.

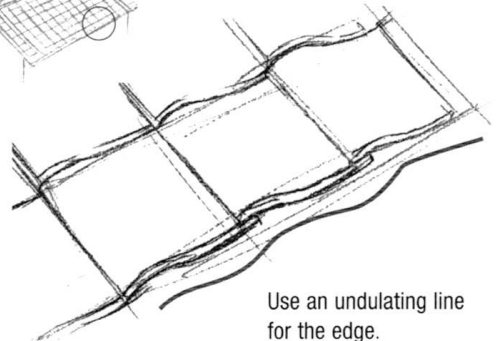
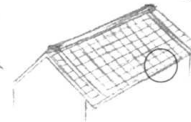
Rounded tiles are also used in designated locations.



The tiles overlap, giving them a terraced appearance.

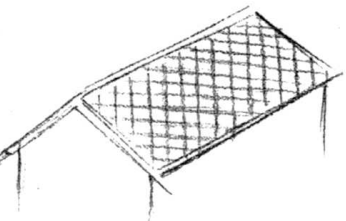


This is how a typical clay tile looks. The ends overlap.



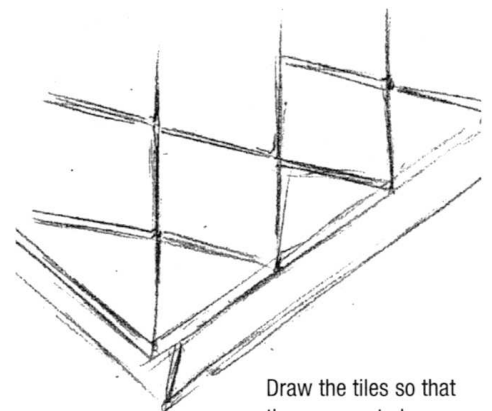
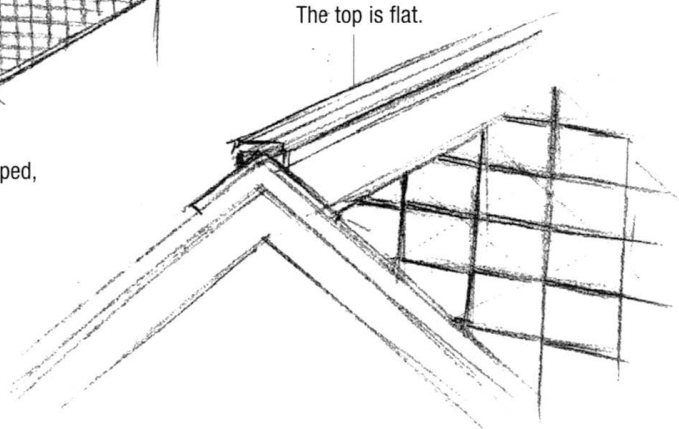
Use an undulating line for the edge.

Flat Roof Tiles



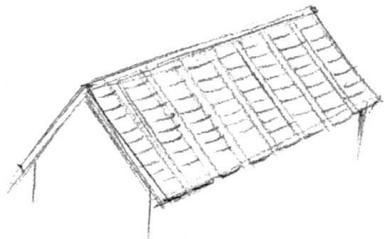
Use a diamond-shaped, checkered pattern.

The top is flat.



Draw the tiles so that they appear to have beveled edges.

Terracotta Roofs



Use straight, parallel lines to divide the roof into sections and then draw gently arcing lines between them.

Imagine a cylinder passing through rings.

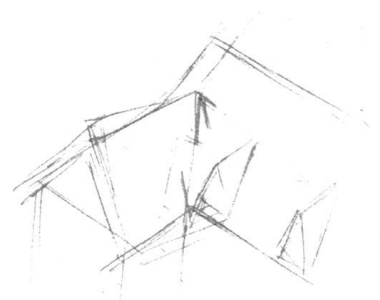
The terracotta tiles cover the roof all the way to its ends. This is one difference between a terracotta tile roof and a flat tile or Japanese-style clay tile roof.



The terracotta tiles come as a set of two. Make sure that you correctly capture the difference in their curves when you draw.

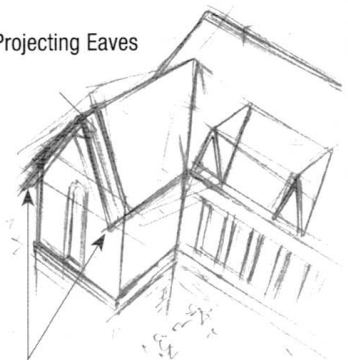
^a Terracotta Roofs Occasionally Appear on Western Houses

Terracotta tiles are also called "Roman tiles." Pictured here is a Victorian-style roof with a sharply steeped roof. The sharp, pointed shapes indicative of the Victorian style were influenced by Romanesque architecture.



The above shows a rough sketch of a Western-style house.

Projecting Eaves

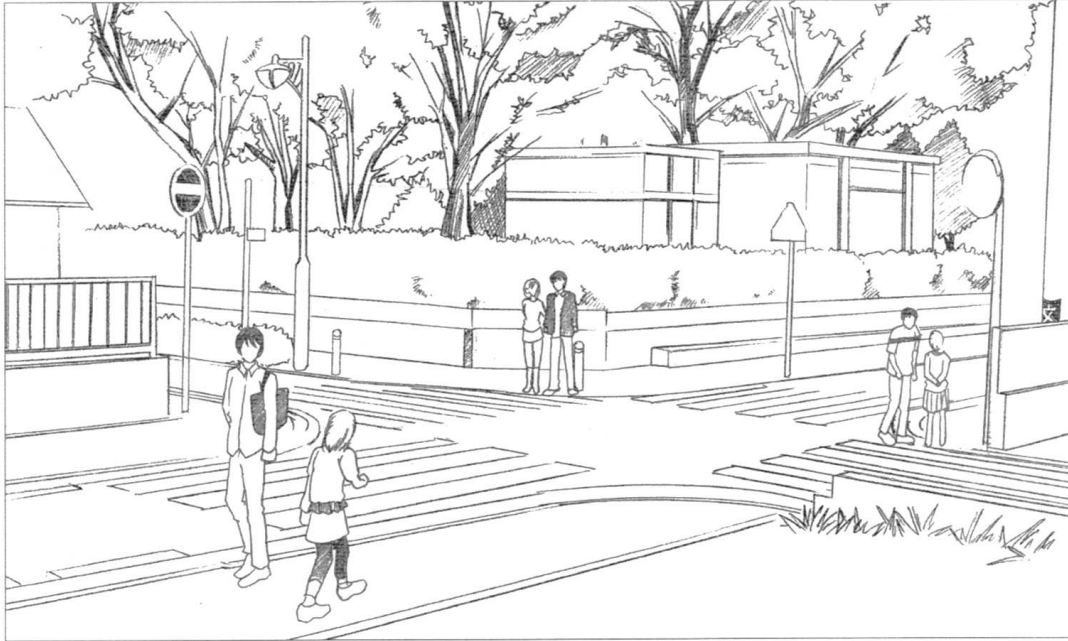


Ensure that the bases of the eaves' projecting portions are parallel.

Drawing Houses and Streets

Most houses sit along a street. Show a spatial relationship between houses and streets when you draw.

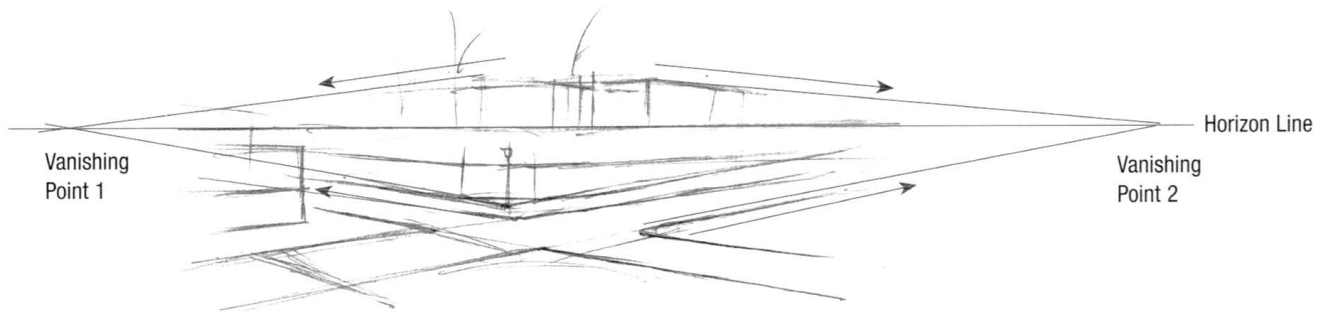
Drawing a Residential Street Intersection



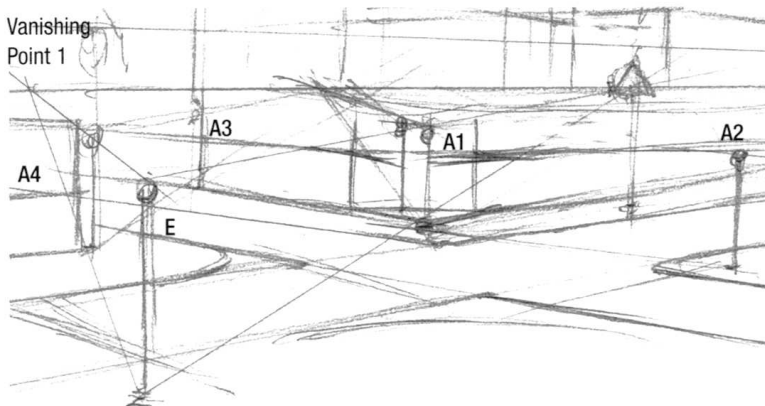
Reference Photo

Establish the street's perspective and then match the buildings to it.

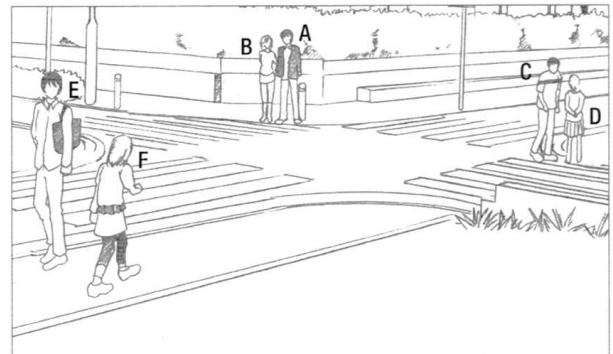
*"Establish a perspective" refers to determining the positions of the horizon line and vanishing points.



● Positioning Characters: Transferring Mock-up Figures and Reducing Head-Lengths to Differentiate Figures' Heights



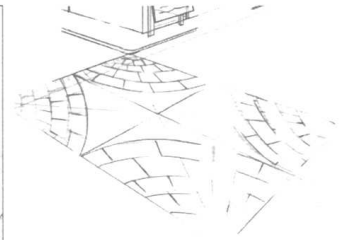
A simple lateral transfer of a mock-up figure cannot be used in this case. Instead, draw Mock-up Figure A1 and use the vanishing point to position Mock-up Figures A2 and A3. Mock-up Figure A4 functions purely to determine the garden wall's scale.



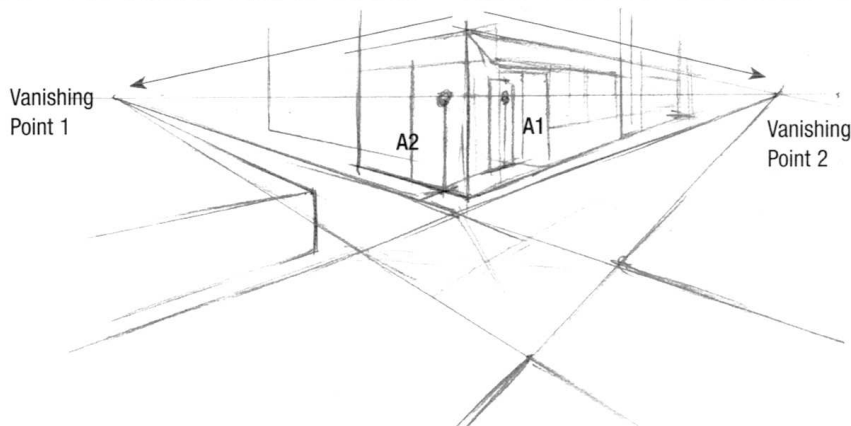
Use Mock-up Figures A1 and A2 to produce Characters A and C. Reduce the head-lengths of the mock-up figures to create Characters B and D. Connect the feet of Mock-up Figure A1 to position E to transfer the mock-up figure laterally and create Character E. Reduce the head-lengths of Character E to produce Character F.

Fashionable Shopping District Street Corner

Placing bricks at an intersection's center creates the atmosphere of a fashionable shopping district.



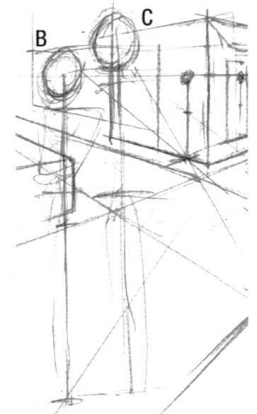
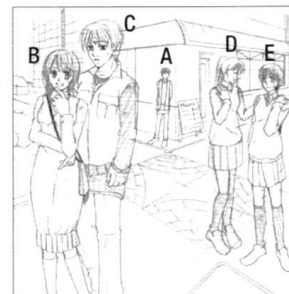
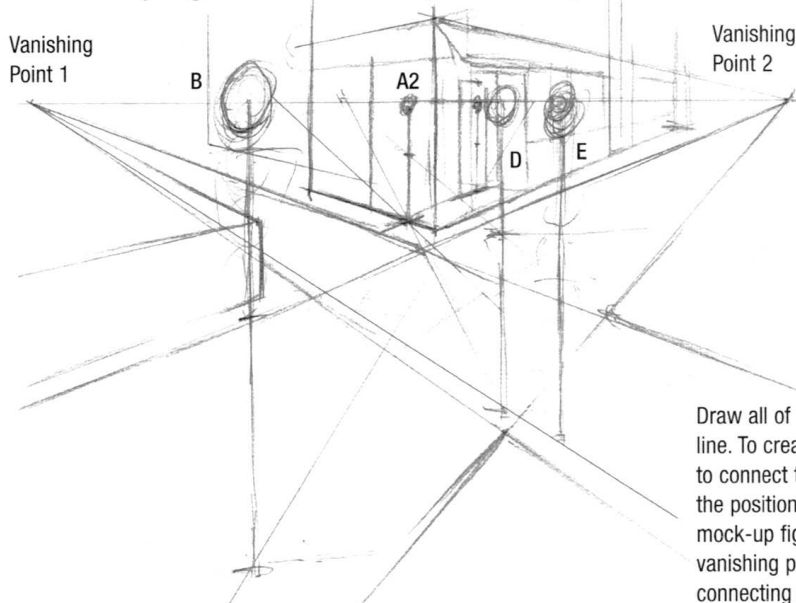
Use the "X method" to divide the rectangle into four parts.



The sides of the buildings facing the street each slope toward the street's vanishing points. In other words, the buildings are drawn in the same perspective as the street.

Mock-up Figure A1 in the doorway is used as a basis for drawing Mock-up Figure A2 against the wall. Both mock-up figures serve as a basis for scaling the buildings and the distribution of the characters within the scene (by transferring the mock-up figures).

● Positioning Characters: Aligning Characters' Heads along the Horizon Line, Transferring Mock-up Figures and Reducing Head-Lengths to Differentiate Characters' Heights



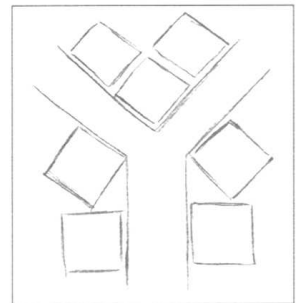
Draw all of the figures' heads along the horizon line. To create Characters B and D, draw lines to connect the feet of Mock-up Figure A2 to the positions of B and D and then transfer the mock-up figure to each location. Using the vanishing point as a basis, draw a line connecting from the feet of Character D to establish the position of Character E.

C (the boy) is half a head-length taller than B (the girl). This seemingly trivial difference of a half head-length actually creates a notable difference in height.

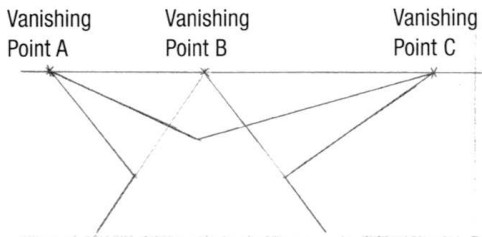
House at a Fork in a Road



Reference Photo

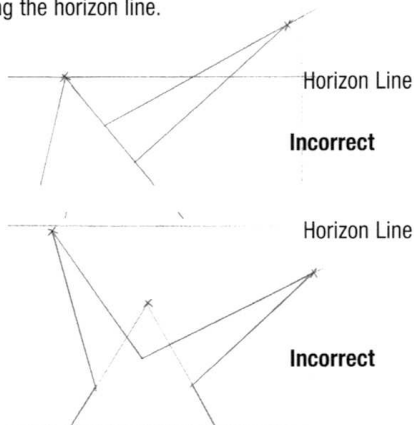


Produce a site sketch, making sure that you capture the street and the houses along the street.



Apply the same principles for drawing a bending road to drawing this fork in the road. Give each branch of the road its own vanishing point.

Draw the vanishing points along the horizon line.



Draw the house in two-point perspective, using Vanishing Points A and B.

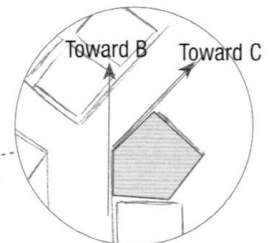
Toward Vanishing Point A

Toward Vanishing Point C

Refer to the circle enlargement for this house.

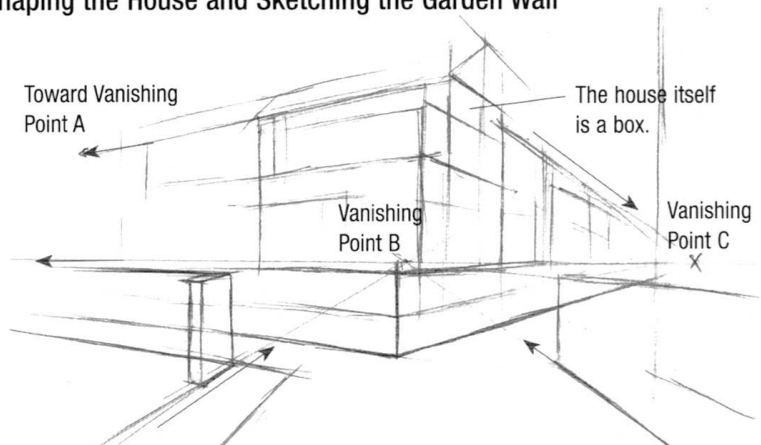
Toward Vanishing Point B

Use one-point perspective to draw the house along the street that moves toward Vanishing Point B.

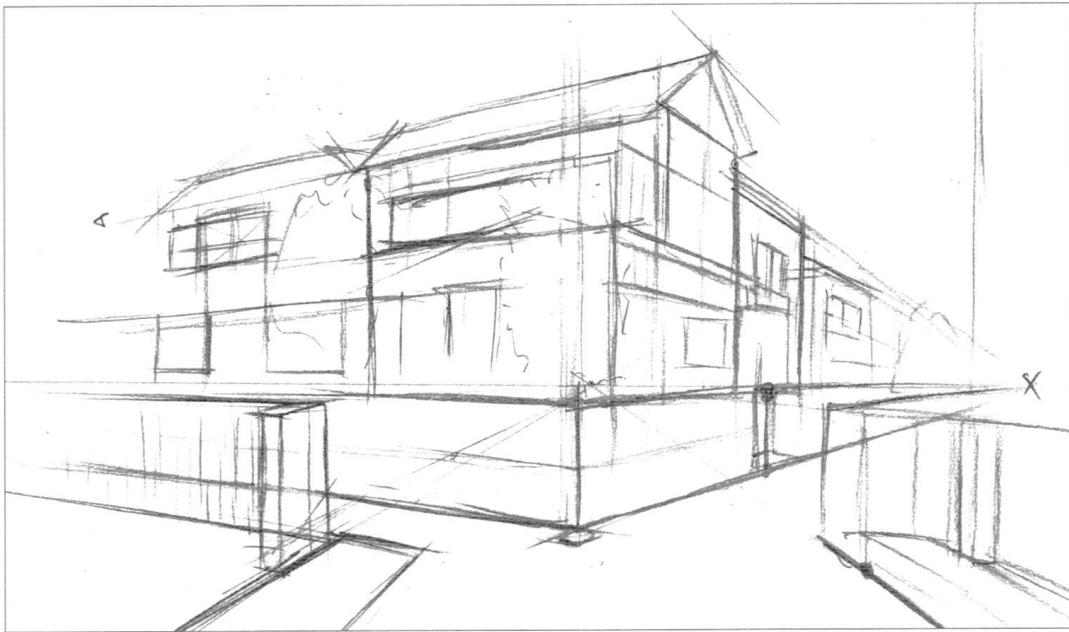


Imagine a house along the street with a garden wall and other common elements when shaping this corner house.

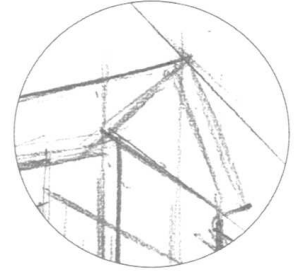
Shaping the House and Sketching the Garden Wall



Draw the street, and then draw the exterior contours of the garden wall and house, adhering to the street's perspective.

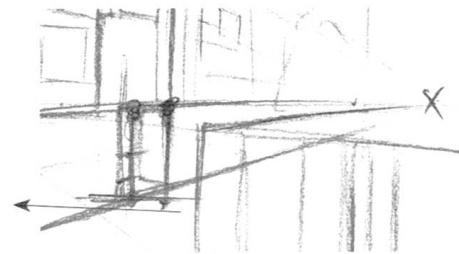
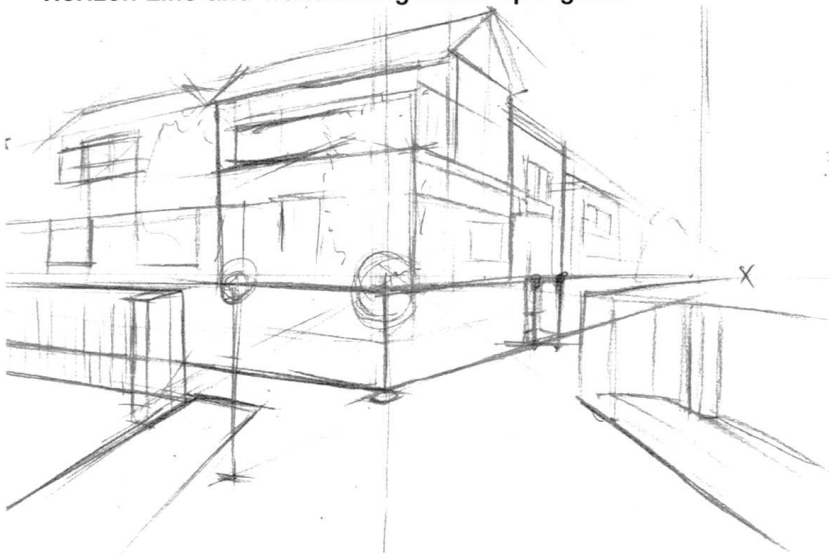


Add the windows, gate, and other details. Position a mock-up figure next to the gate to determine its scale.



The house has a gabled roof.

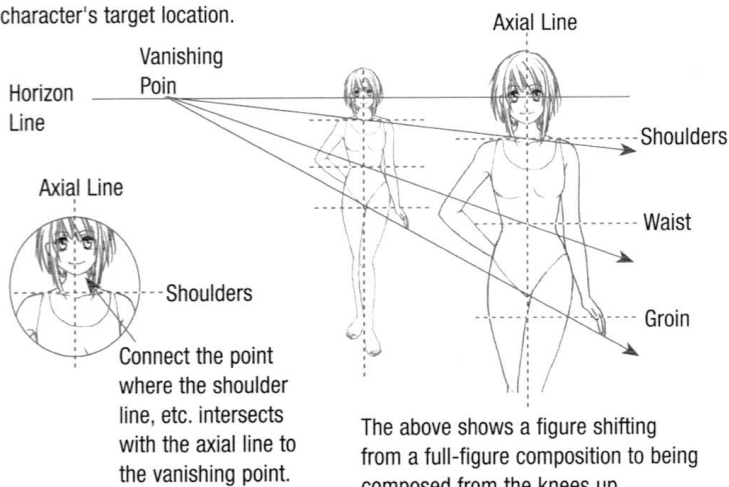
● Positioning Characters: Aligning the Characters' Heads along the Horizon Line and Transferring Mock-up Figures



Transfer the mock-up figure. Strictly speaking, you should align the position of the figure's feet with Vanishing Point A off to the left. However, since this is a long-range composition, it is fine just to approximate.

When Not Drawing a Figure's Feet, Transfer Mock-up Body Parts Instead of the Full Figure

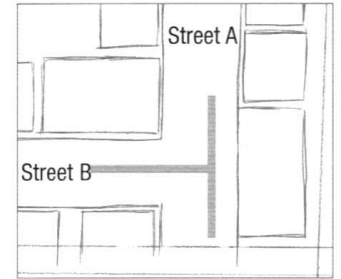
When drawing a close-up of a figure from the chest up or from the waist up, connect the figure's shoulders or waist to the vanishing point. This will allow you to transfer that body part to the character's target location.



T-shaped Intersections

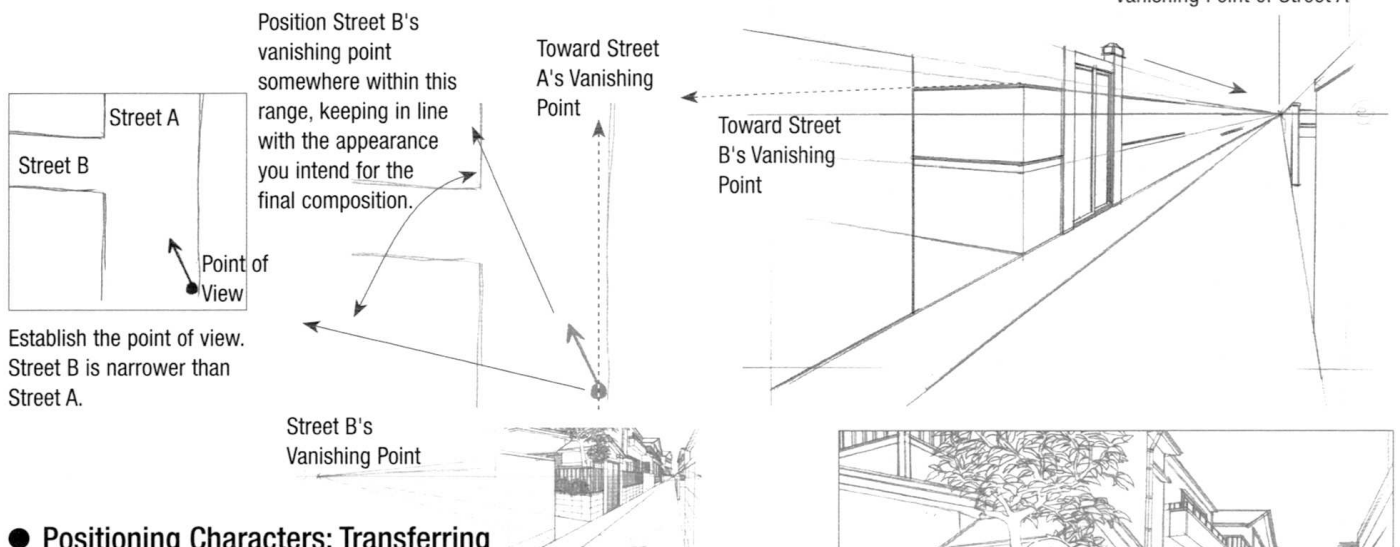


Reference Photo

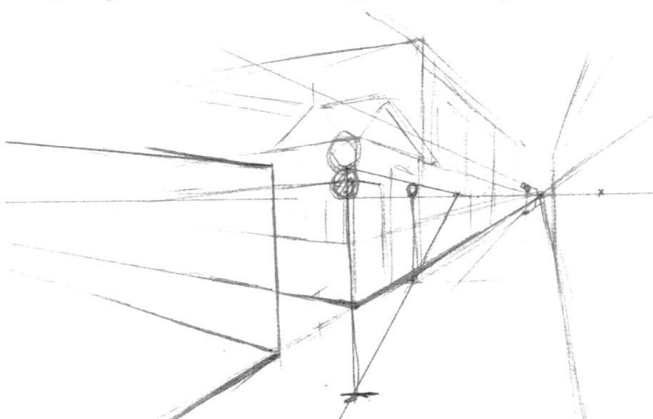


Site Sketch: When drawing a street, first draw a site sketch. It will help visually clarify the point of view when you compose the actual drawing.

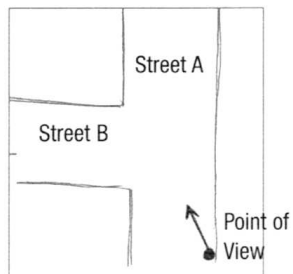
● Assuming that Street B Is Narrow



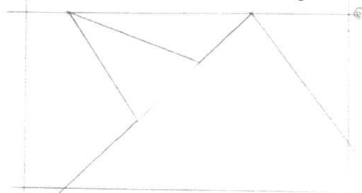
● Positioning Characters: Transferring Mock-up Figures and Increasing Head-Lengths



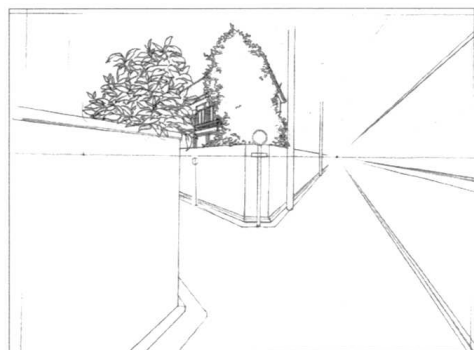
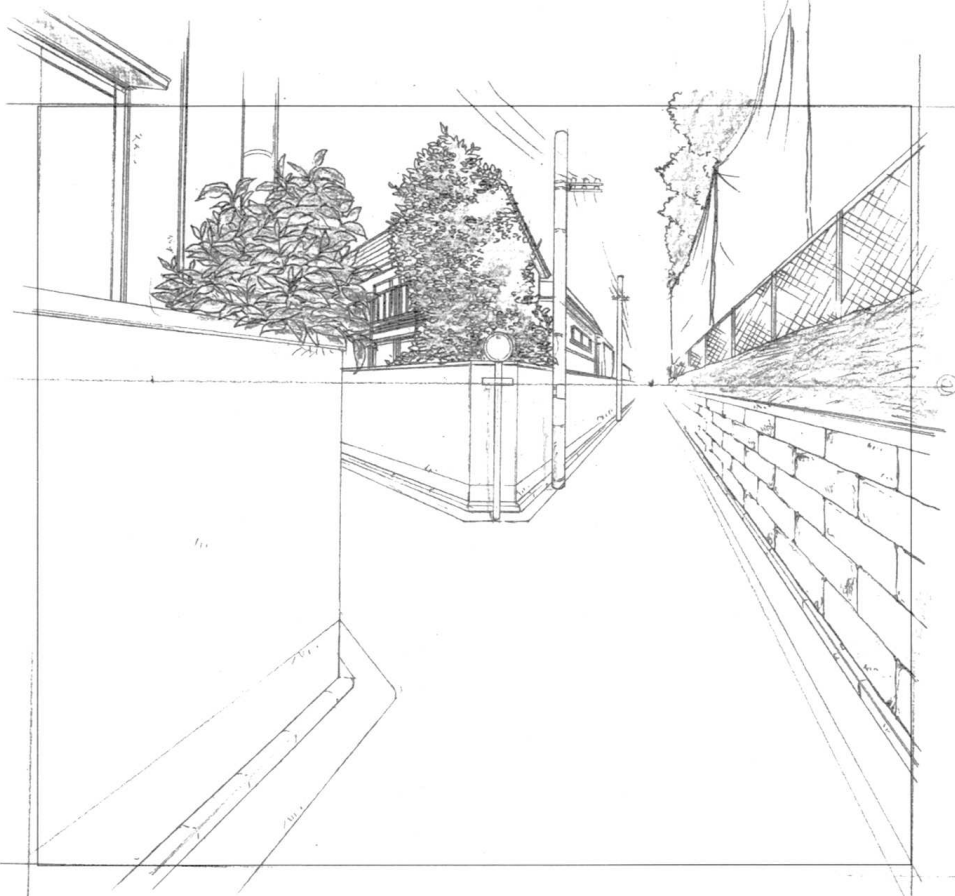
● Assuming That Street B Is Wide



Street B's
Vanishing Point Street A's
Vanishing Point



Draw the scene so that Street B's width is obvious to the viewer and without changing the point of view. The vanishing points lie much closer together.

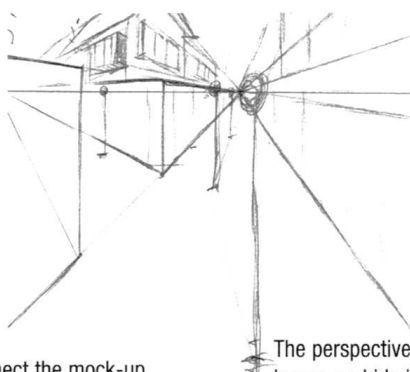


A mock-up figure and a street sign serve as bases for determining the wall's scale. With the vanishing points positioned so close, it seemed better to avoid drawing the house. Note how the house is hidden behind trees instead.



The artist drew this house as an experiment. The artist followed the principles of two-point perspective exactly, but the wall's angle is too sharp and looks odd.

● Positioning Characters: Aligning the Characters' Heads along the Horizon Line and Transferring Mock-up Characters



Connect the mock-up figures' feet to the vanishing points to establish where to position the characters' feet.

The perspective oddly distorted the house, so hide it behind trees, and condense the composition's main motif to that of the "streets." Now we seem to be viewing a scene of students heading to school or people heading off to work.

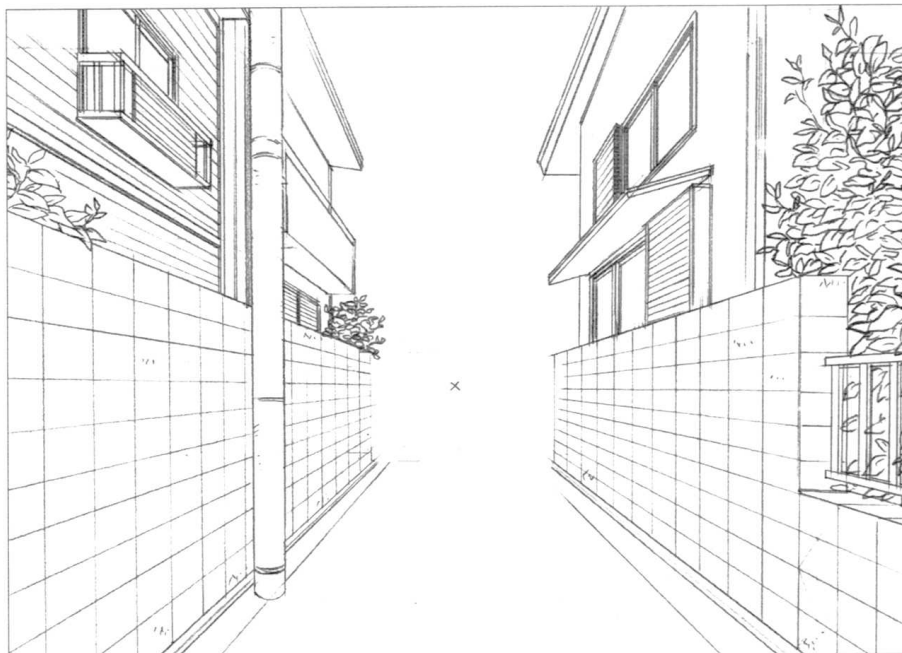


Sketching Techniques: Drawing Streets

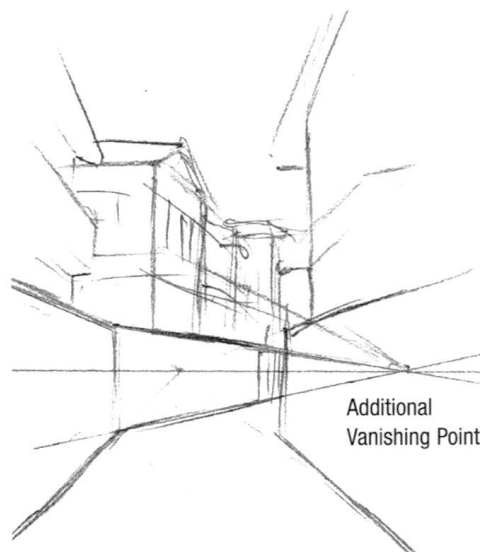
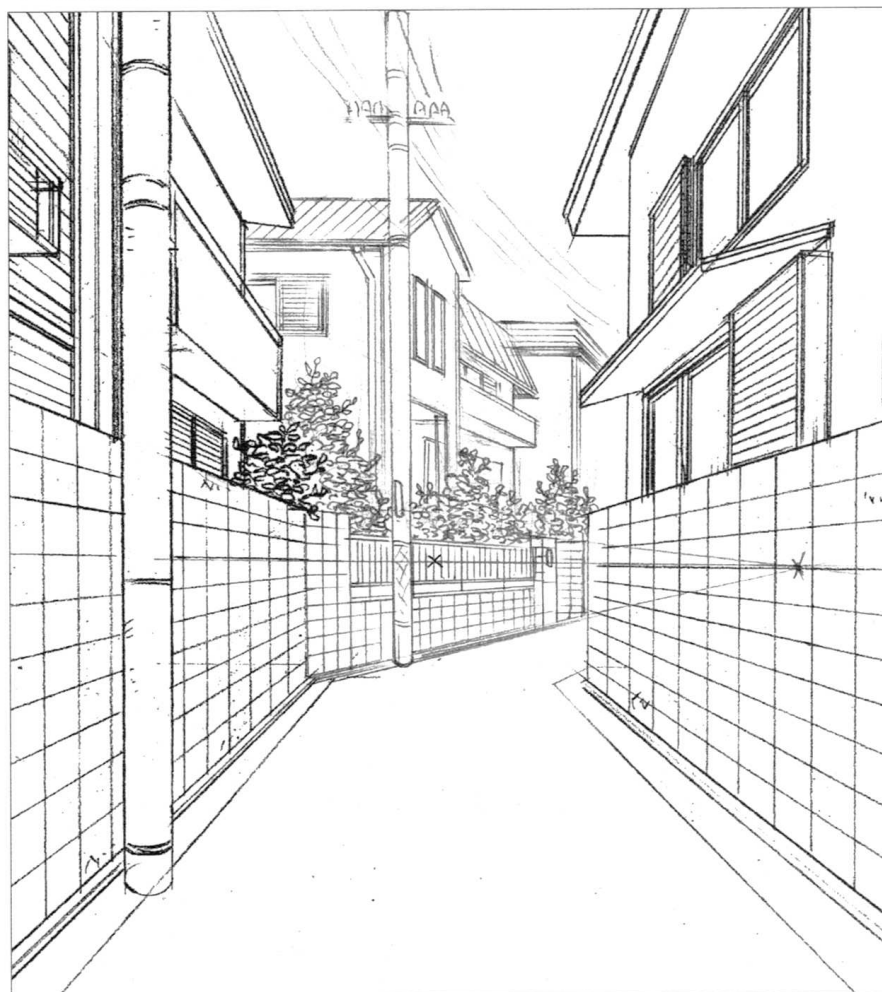
How should the end of a single, linear street (i.e. the vanishing point region) be handled? The trick is to consider how best to hide the vanishing point with something else.



Here we see a street that continues straight on, forever. This is not something we encounter regularly in real life.

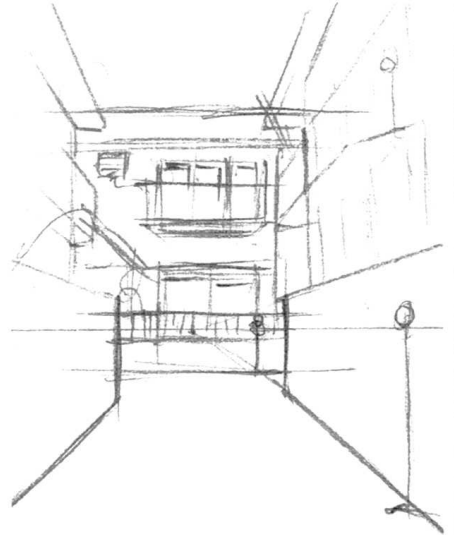
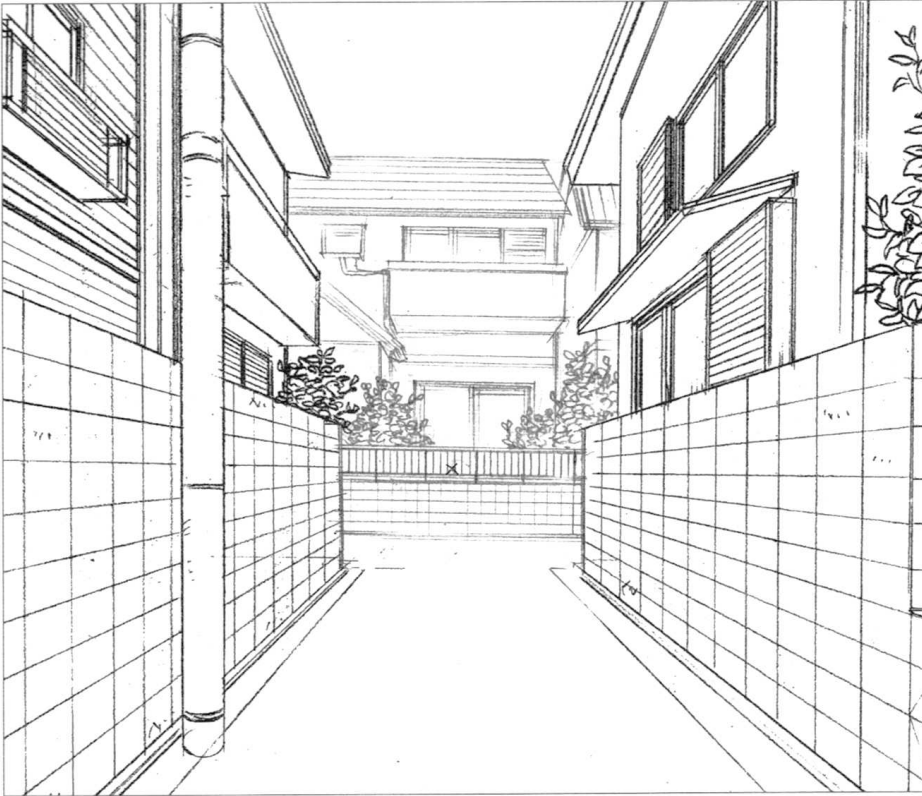


● Solution 1: Draw a Bend in the Street



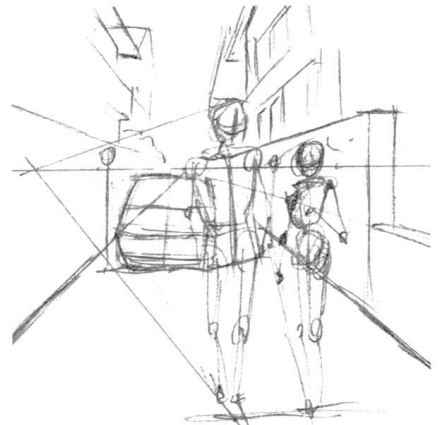
Add another vanishing point and create a street with a bend. Drawing houses along this new section of street transforms the scene into a residential neighborhood. Replacing the houses with an abundance of trees would turn the scene into a cluster of trees (like that of a park).

● Solution 2: Drawing a Dead End, a T-shaped Intersection, or a Forked Road



The artist created a T-shaped intersection and added a house, seen from the front. While this might seem a simple solution, it does require using mock-up figures to scale the garden walls and determine the windows' heights, while drawing the house.

● Solution 3: Adding Cars or People

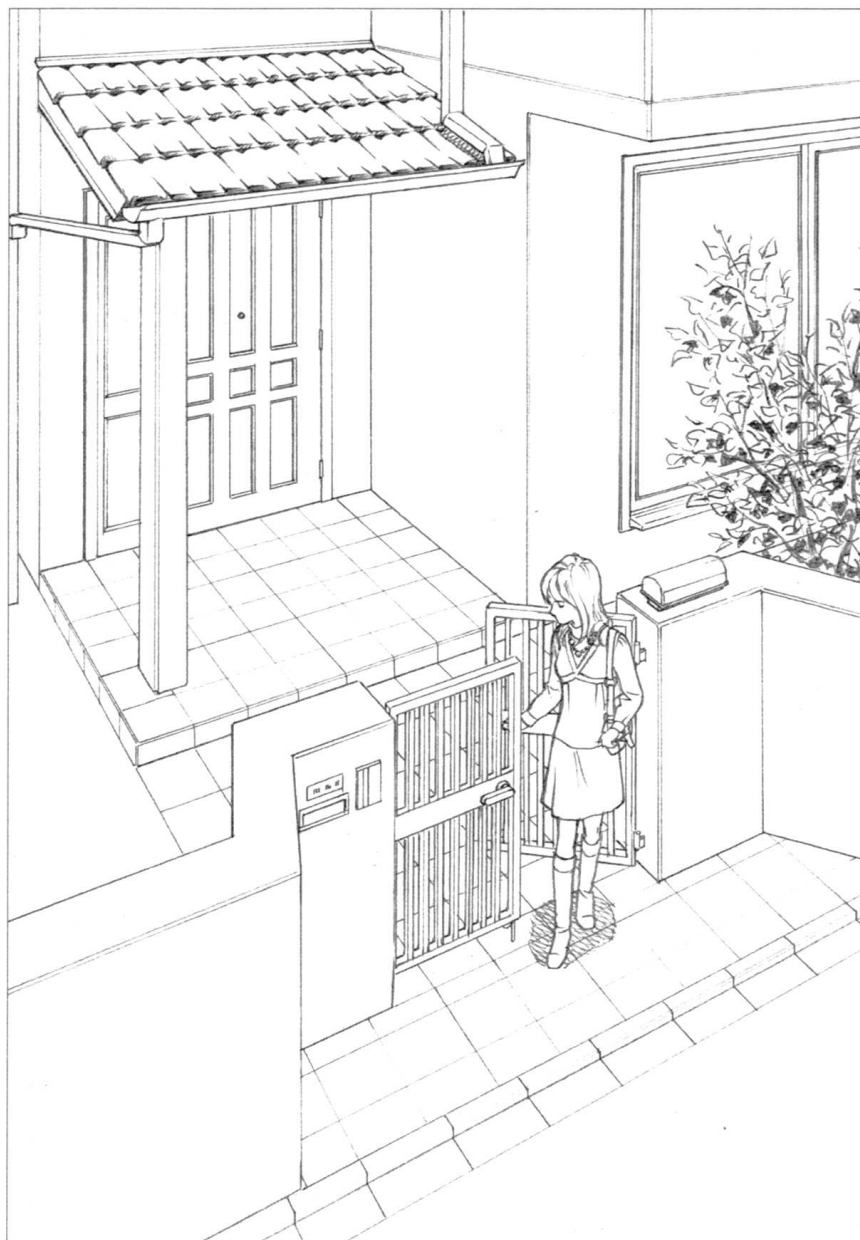


Once again, use mock-up figures to determine the scaling of cars. Transfer the mock-up figures as discussed.



Make this area hazy.

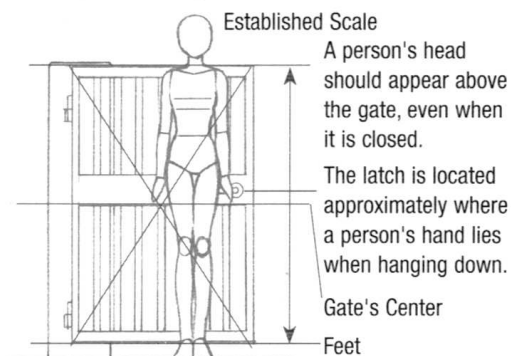
If you feel concerned about regions of open sky or blank spaces, then add a roof using fine or light lines. Having the end of the house or other object fade into nothingness is considered blurring or making an object hazy. Remember this as a technique for abbreviating or simplifying a drawing.



● Setting up a House's Front Entrance

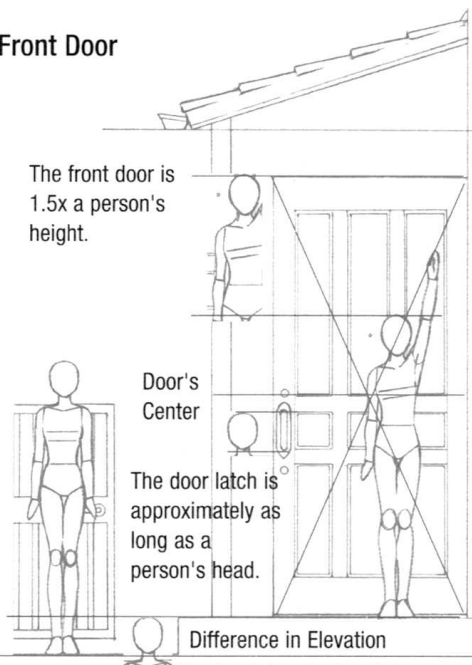
Use a human figure as a basis for scaling objects.

Iron gate Facing the Street



Front Door

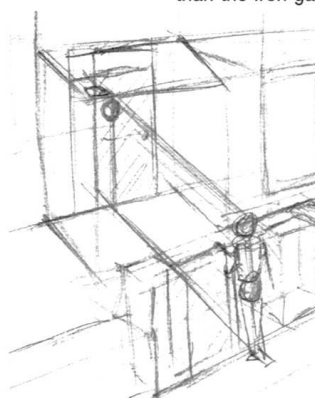
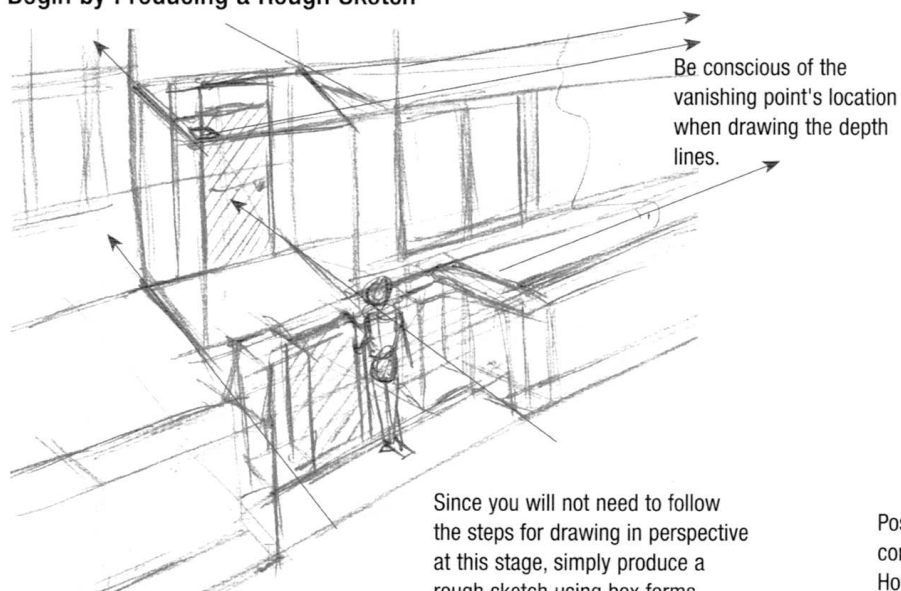
The front door is 1.5x a person's height.



Difference in Elevation

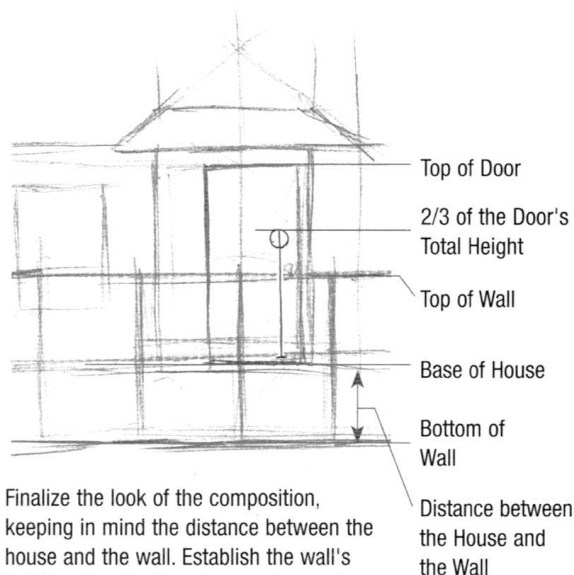
The front door is elevated approximately one head-length (approx. 20 cm or 7 7/8") higher than the iron gate.

Begin by Producing a Rough Sketch



Position a mock-up figure at the front door. You would consider differences in elevation if you were drafting. However, in this case you are merely generating a sketch of how the final composition will look, so transfer mock-up figures around the space to obtain a general idea.

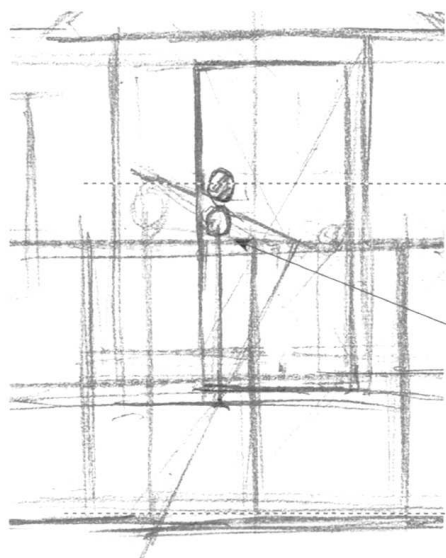
● Drawing a Front View



Finalize the look of the composition, keeping in mind the distance between the house and the wall. Establish the wall's height using the front door and a mock-up figure as a basis for scaling.



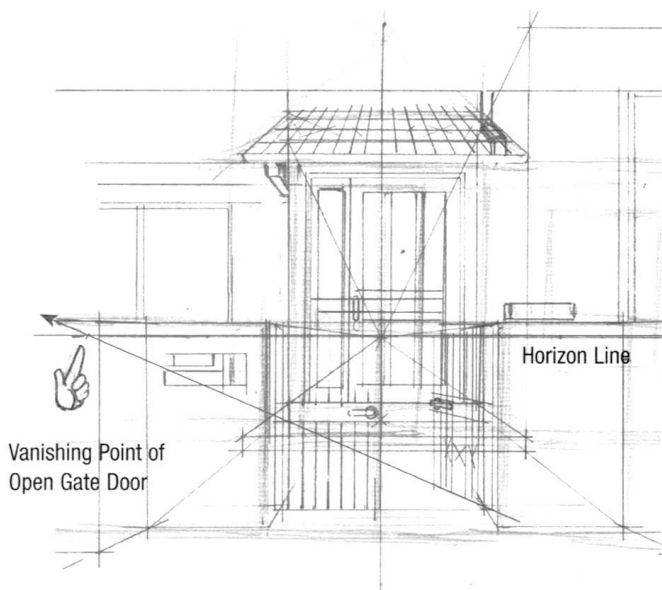
Transferring a Mock-up Figure to Establish the Height of the Iron Gate



There is a difference in elevation, so use a mock-up figure less one head-length in height as a basis for scaling. The height mock-up figure used here can be used without modification to draw the actual character.

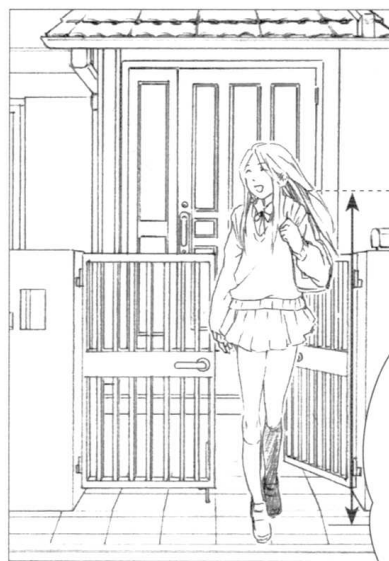


● Compositional Conundrums



Vanishing Point of Open Gate Door

Horizon Line



The above panel shows the composition distributed exactly as preset. The lower panel shows the character drawn one head-length taller. Which one looks more appealing to you?

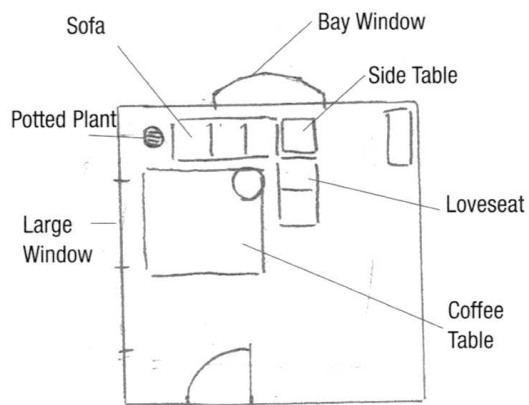
Established Height

While you should not draw a composition without establishing preset terms, adhering too strictly to those preset terms will just hurt your work. Always think about how to compose your artwork effectively so that it suits the scene.

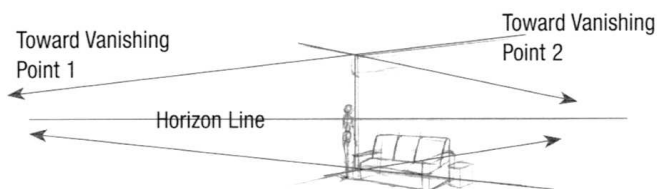
Drawing Room Interiors

Living Rooms

● Starting with a Sparse Room

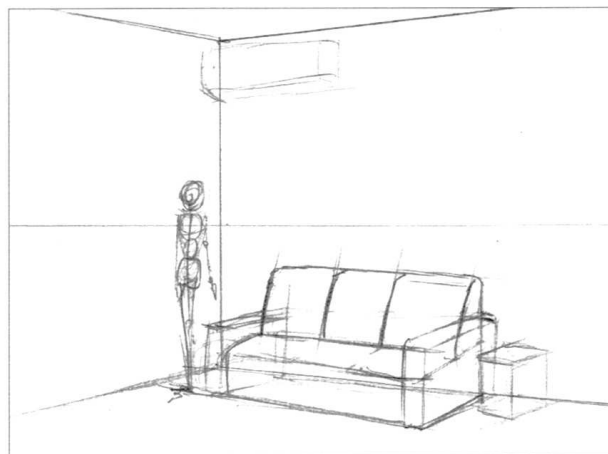


Produce a rough layout of how the room should ideally look.



The vanishing point is positioned far off. Begin by producing a rough sketch of the room, while maintaining awareness of the positions of the horizon line and the two vanishing points.

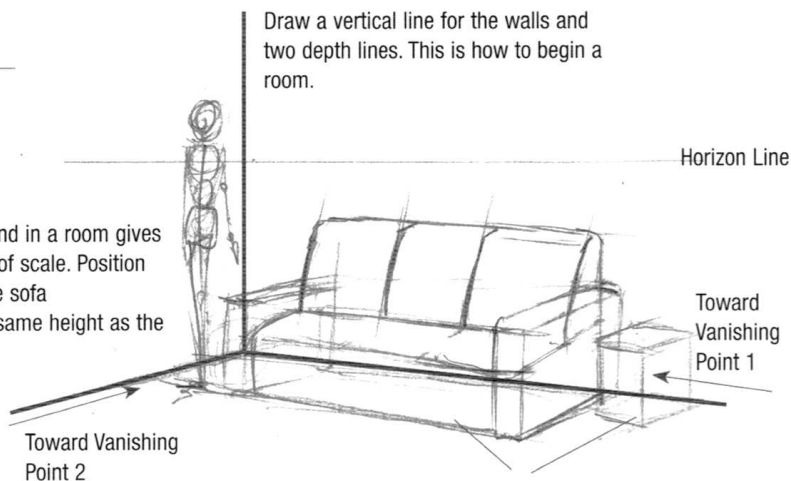
Having a figure stand in a room gives the space a sense of scale. Position the seat area of the sofa approximately the same height as the standing figure.



Start off first with nothing but a side table and sofa.

1. Establishing a Room Corner and Drawing the Sofa Close to a Character

Draw a vertical line for the walls and two depth lines. This is how to begin a room.



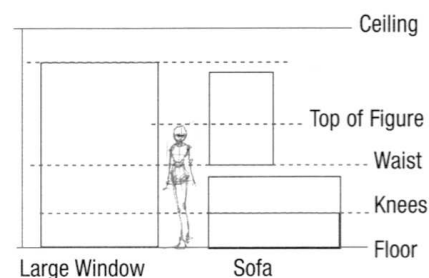
To draw the sofa and the side table, start by sketching the areas they occupy on the floor.

2. Drawing the Window and Seating a Character on the Sofa



Recall the previous discussion of how to draw a window in a corridor and add the living room window.

Using the Standing Figure as a Basis for Scaling Other Objects

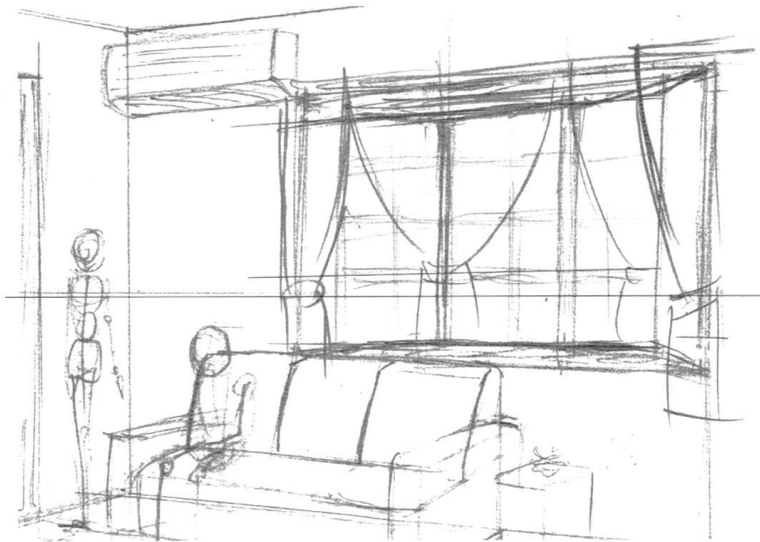
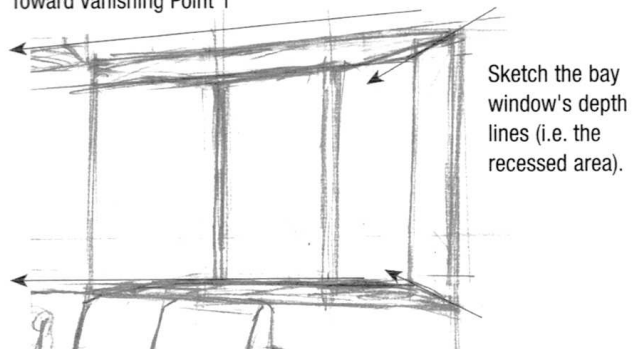


These pages cover how to draw doors, windows, and other room components necessary to creating scenes inside a room or house.

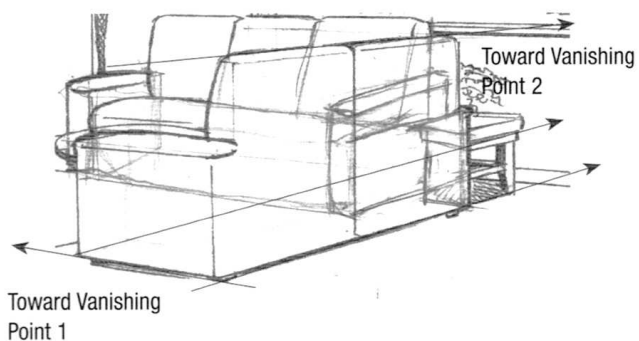
● Embellishing

Adding a Bay Window and Roughly Sketching in Curtains

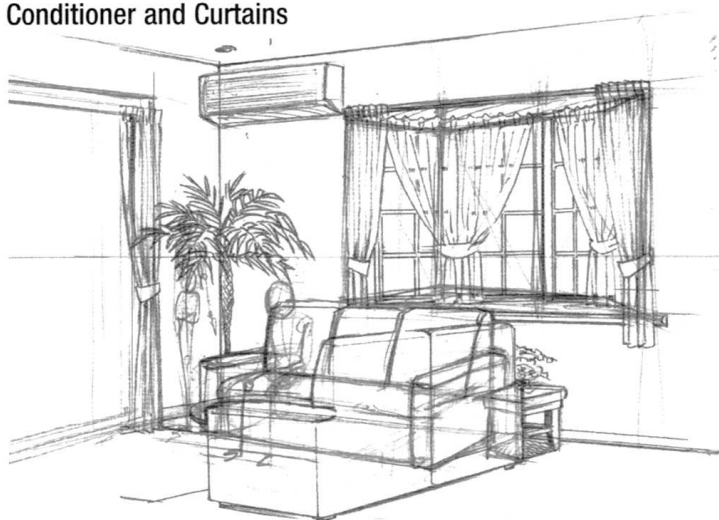
Toward Vanishing Point 1



Sketching the Loveseat



Adding Potted Plants and Adjusting the Forms of the Air-Conditioner and Curtains



It has turned into quite a luxurious room.

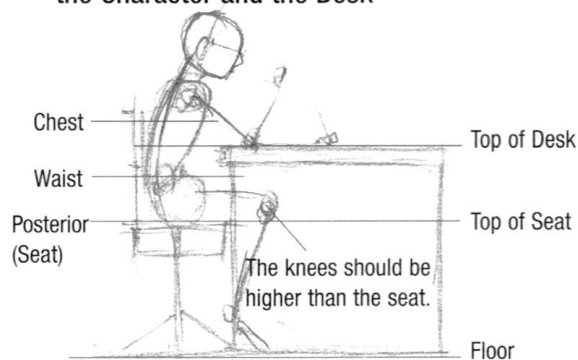


"Simulated two-point perspective" refers to reproducing the look of two-point perspective without strictly adhering to the drawing process.

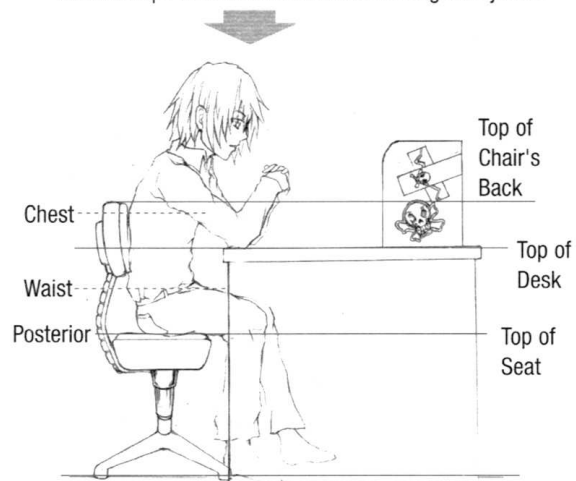
● Drawing a Character at a Desk



Positional Relationship between the Character and the Desk

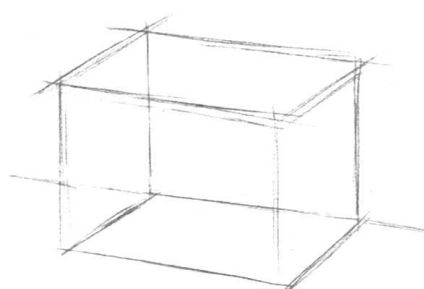


Produce a rough sketch to establish the positional relationships between the desk and the figure's joints.



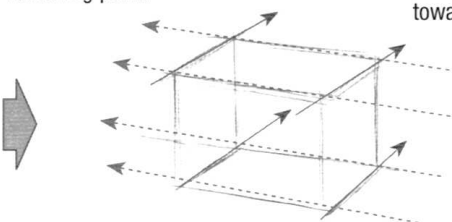
Apply the positional relationships clarified in the rough sketch when formally drawing the character.

Using Simulated Two-Point Perspective to Draw the Desk



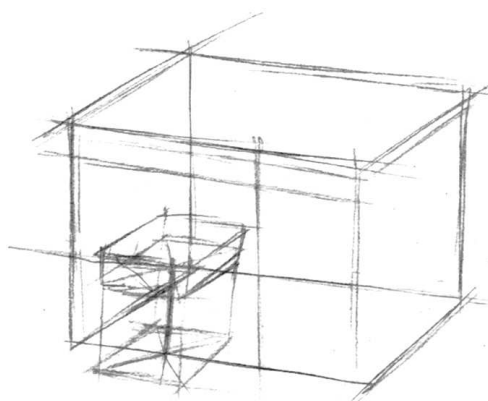
All of the depth lines are virtually parallel to one another.

These diagonal lines appear to travel toward one vanishing point.

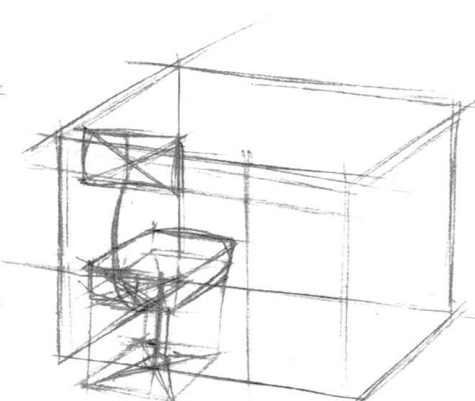


These diagonal lines appear to travel toward another vanishing point.

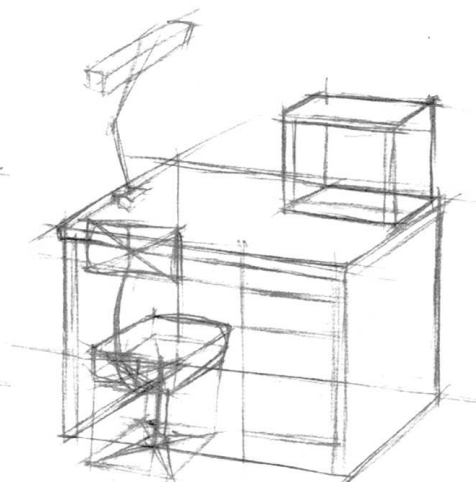
Except for the vertical lines, all other lines are diagonal lines that appear to travel toward a vanishing point.



Draw the desk and the chair's seat in simulated two-point perspective.

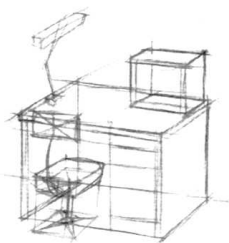


Draw the chair's back, using the top of the desk as a guide.



Sketch objects on top of the desk.

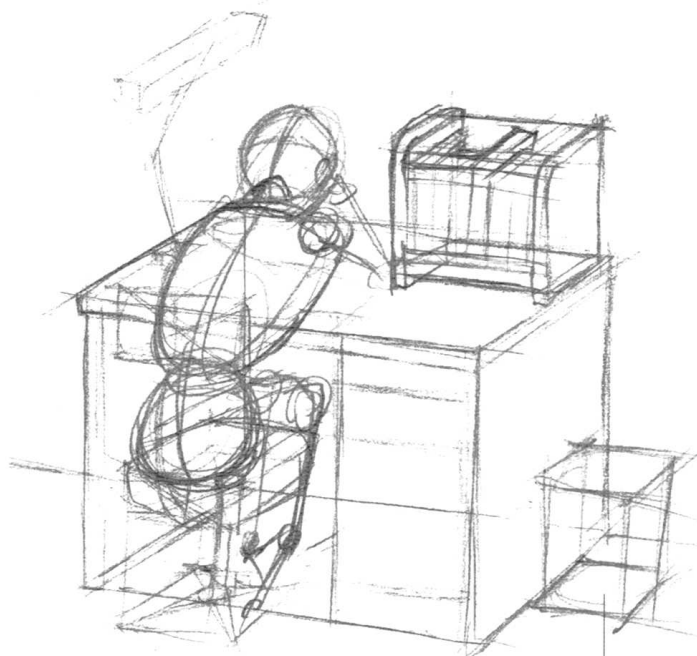
Adding the Character Seated at the Desk



Start with a desk drawn in simulated two-point perspective.

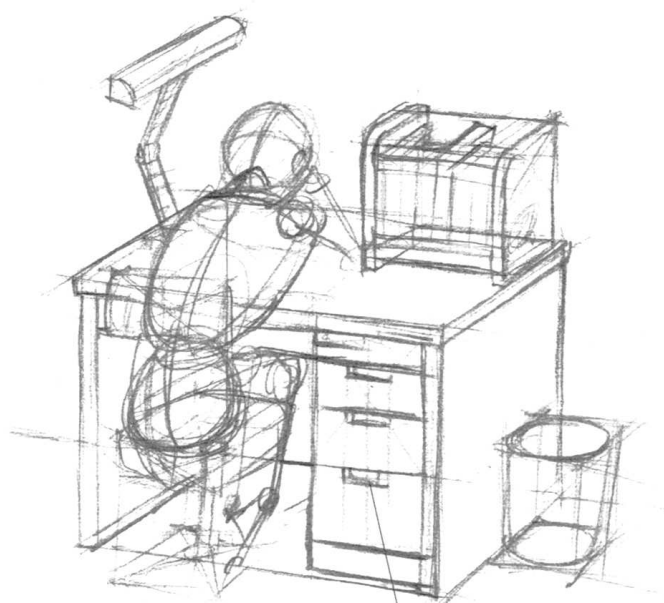


Produce a rough sketch.



Produce a rough sketch of the character.

Sketch a box to represent the wastepaper basket.



Add the drawers and objects on top of the desk.

The drawers' hand grips are centered on the drawers. Use the "X method" to locate the drawers' centers.



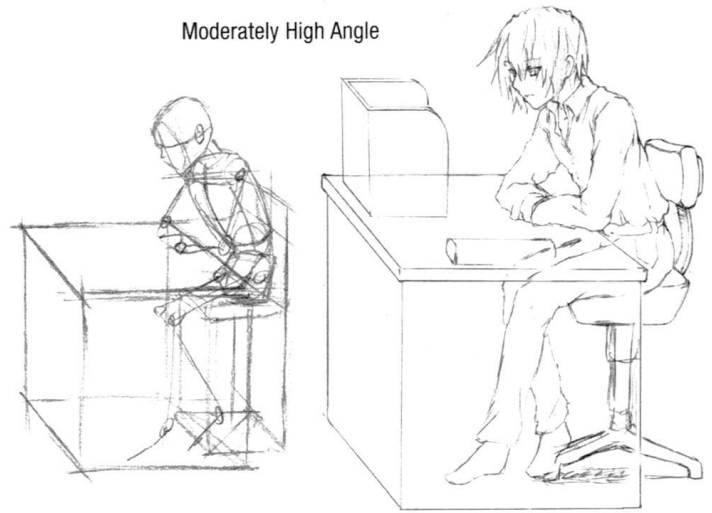
Clean up the sketched lines. Draw the character and add details to the chair and the desk lamp. Finally, add in peripheral details, such as the bookcase and the wastepaper basket to finish.

Sketching in Figures to Establish Objects' Positional Relationships and Composing in Simulated Two-Point Perspective

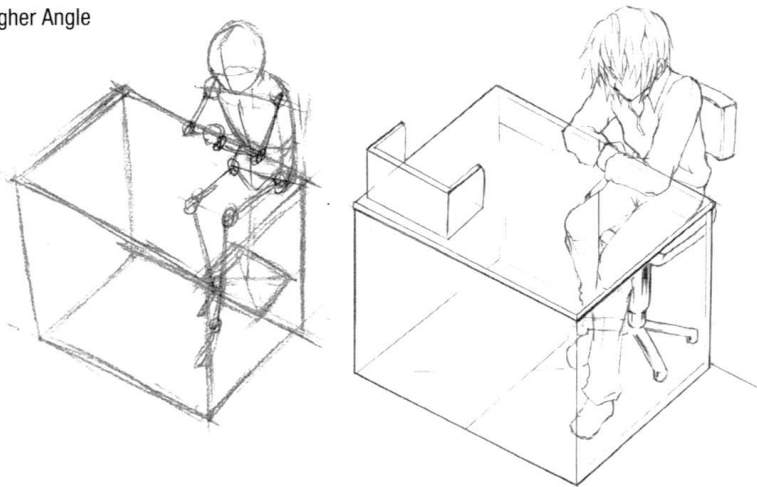
Front View



Moderately High Angle



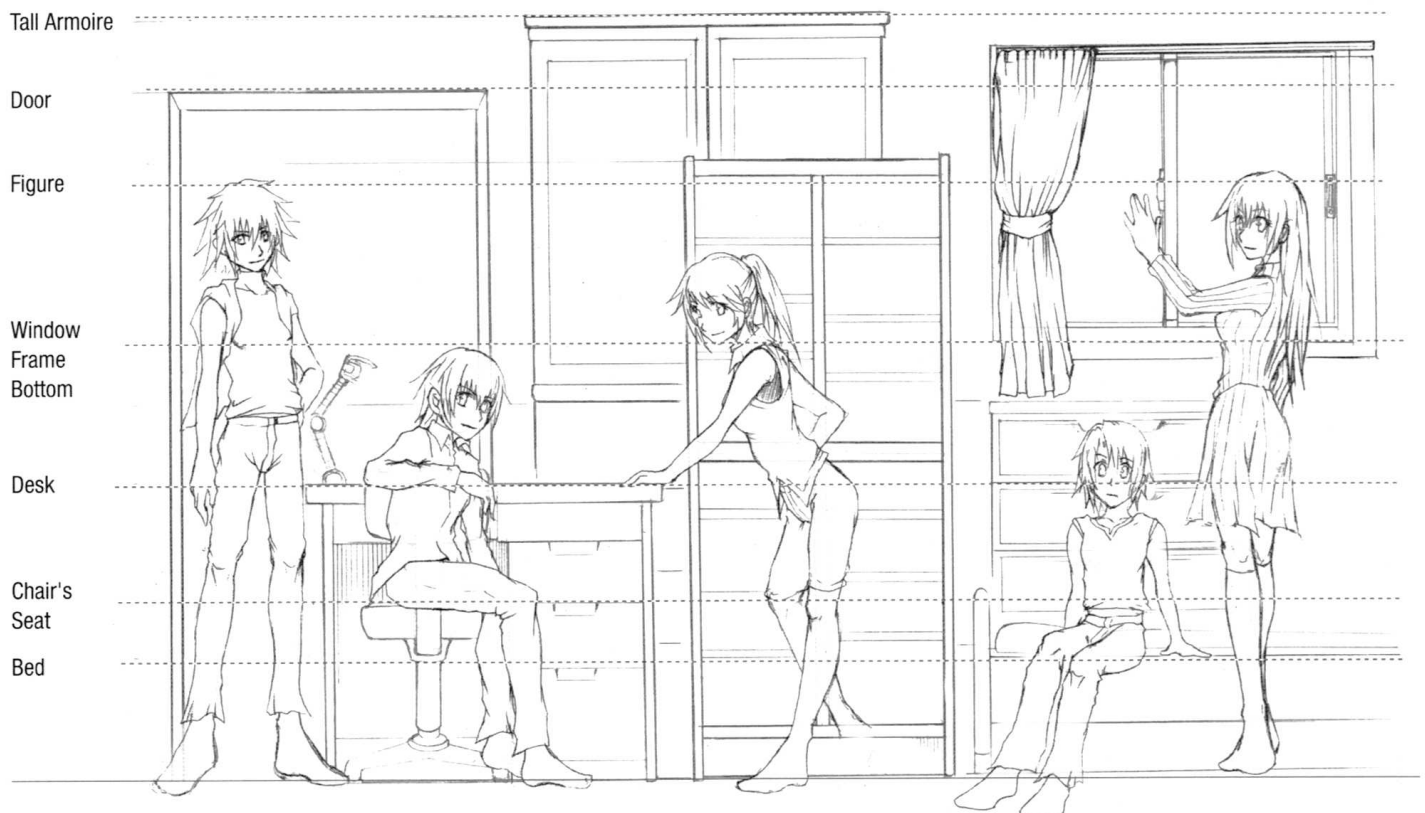
Higher Angle



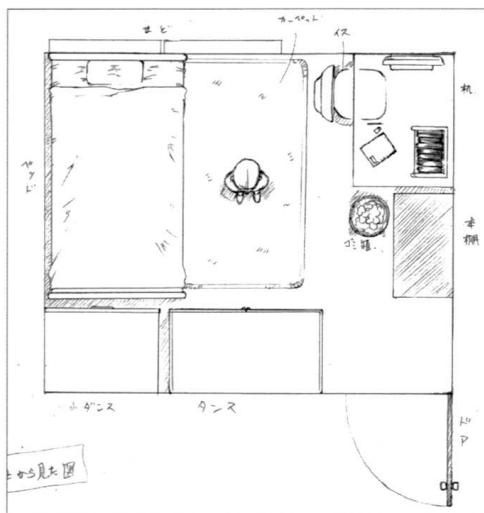
Many room furnishings are rectangular in shape. Sketching figures near objects in a room establishes a sense of scale. This is a useful technique for drawing a room.



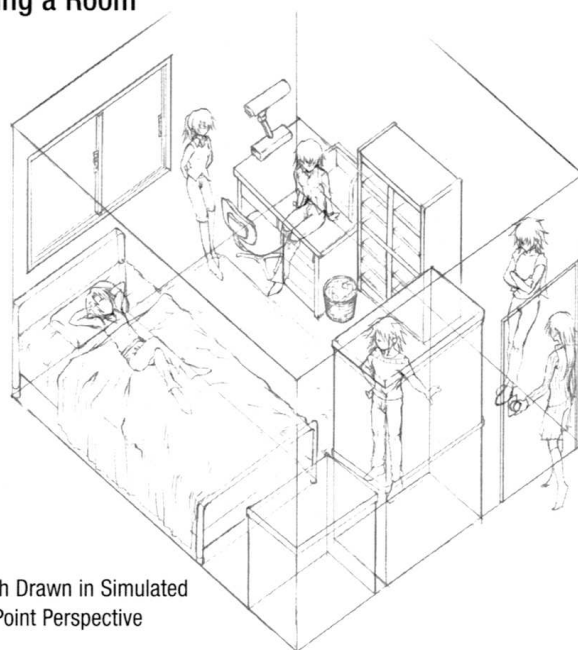
● Figures and Sizes of Furniture and Other Objects Often Found in a Room



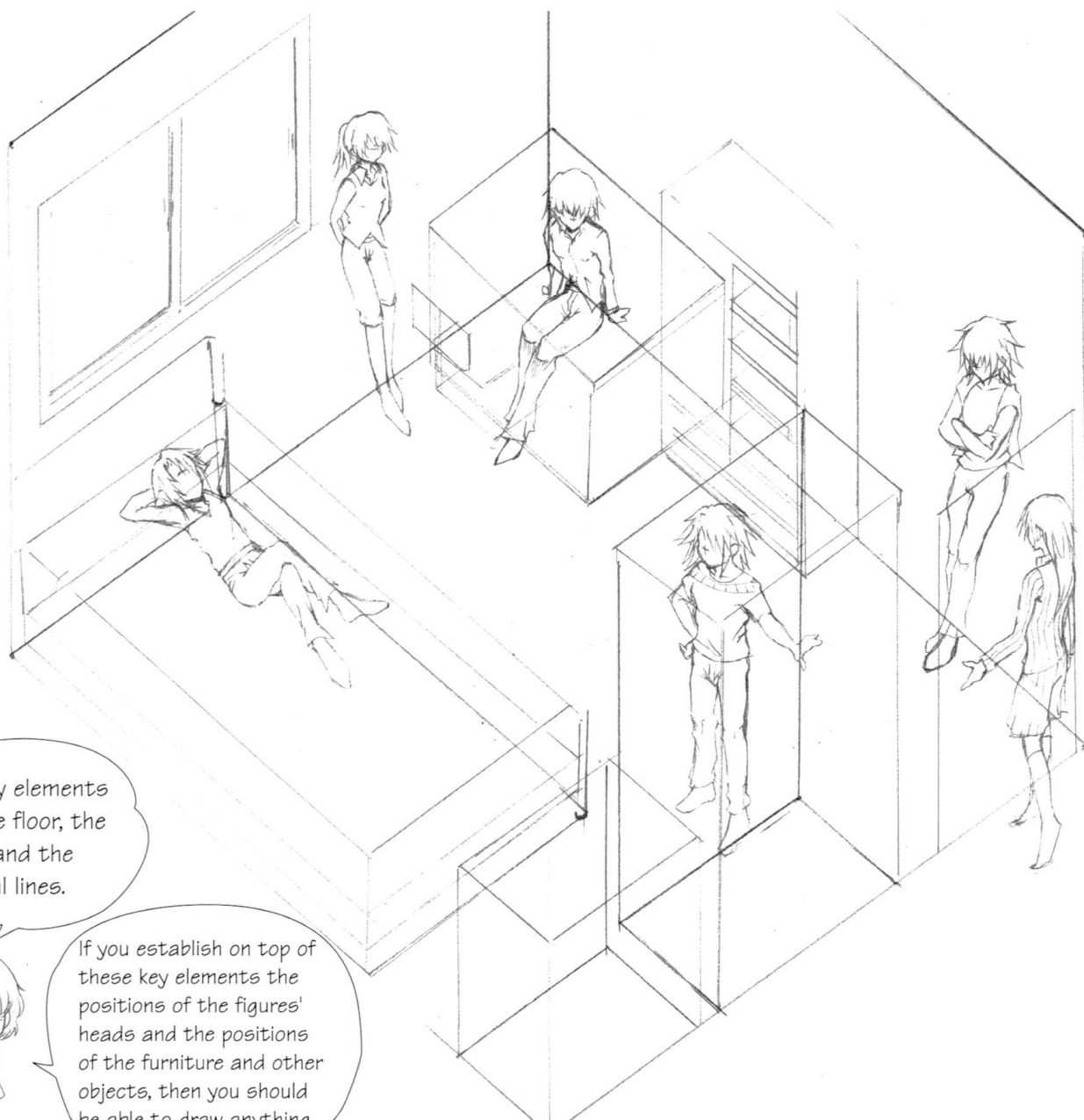
● Produce the Following Preliminary Sketches When Drawing a Room



Room Layout



Sketch Drawn in Simulated Two-Point Perspective

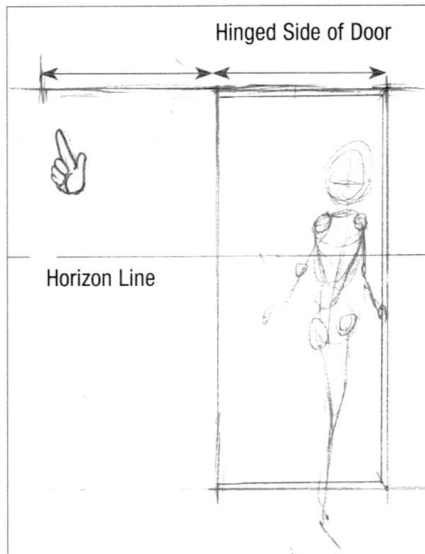


The key elements are the floor, the walls, and the vertical lines.

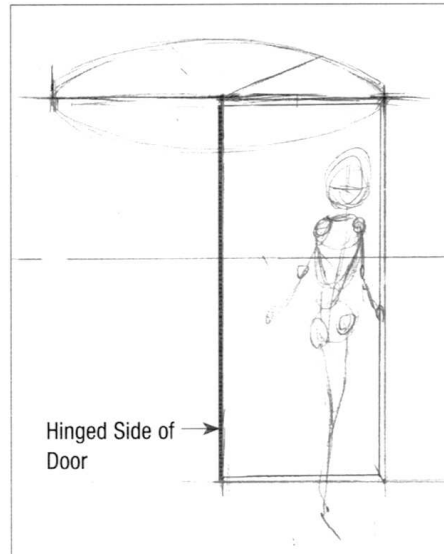


If you establish on top of these key elements the positions of the figures' heads and the positions of the furniture and other objects, then you should be able to draw anything.

● Drawing Open Doors

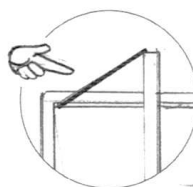


Make this distance the same as the door's width.



Draw a circle with the door's width as its radius.

Visualize this angle for the top of the open door.



Draw the top of the door.

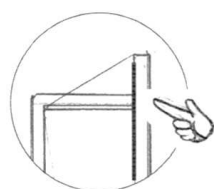
Extend the top of the door out straight.

This line intersects with the horizon line.

This is the upper corner of the door's hinged side (i.e. the upper corner of the door frame).

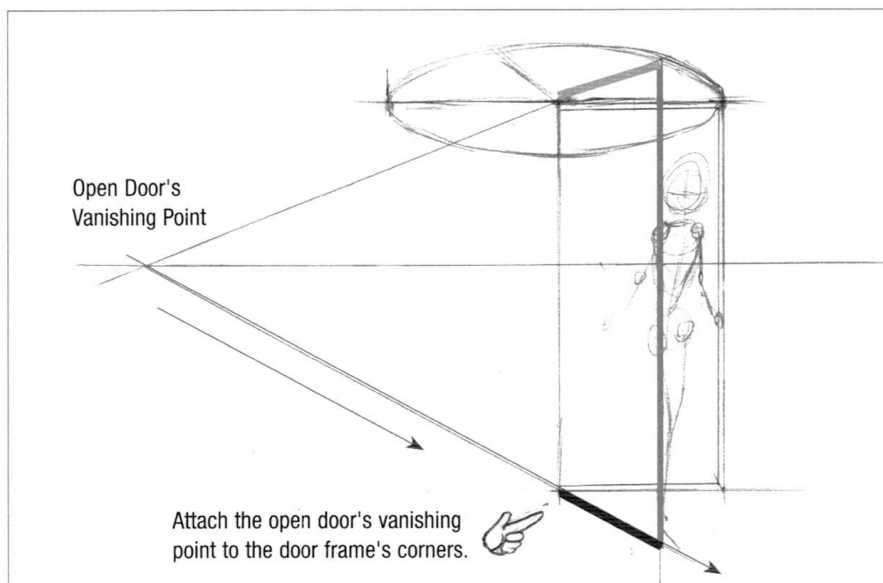


This is the open door's vanishing point.



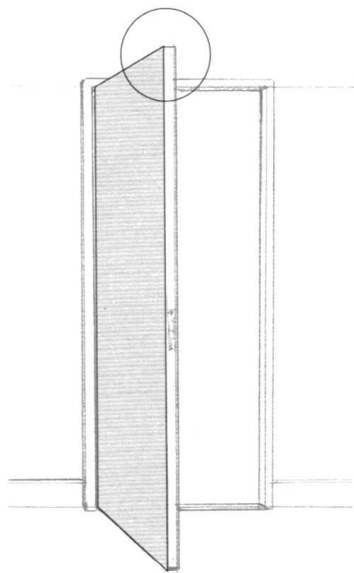
Next, draw the door's edge.

Extend a line running straight down.

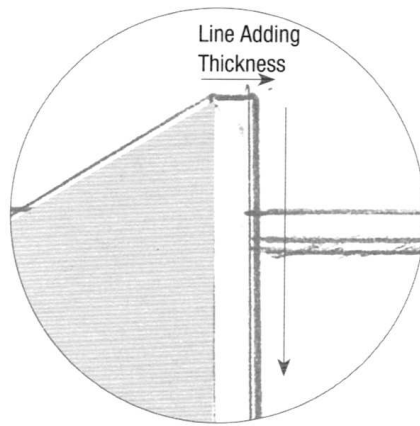


Open Door's Vanishing Point

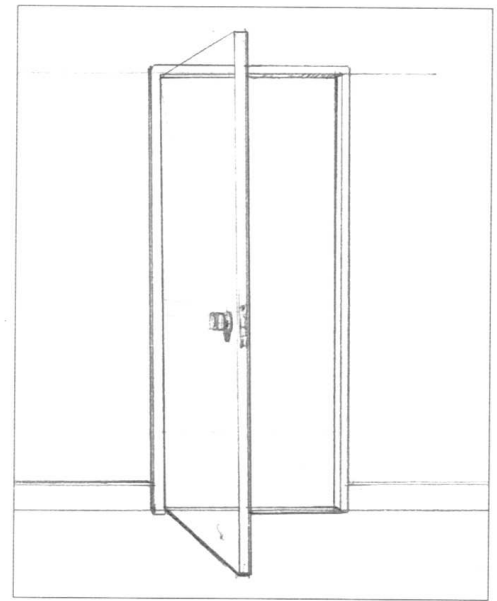
Attach the open door's vanishing point to the door frame's corners.



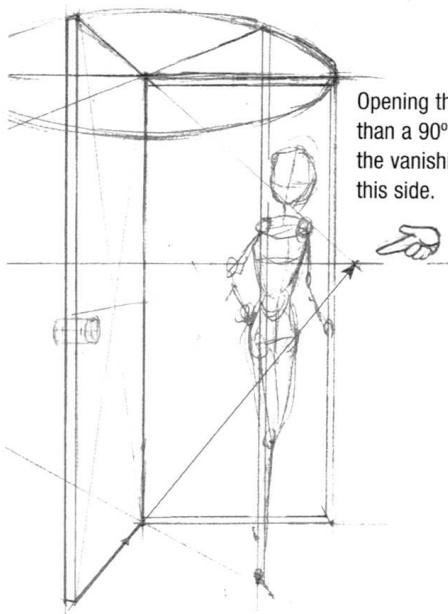
At this point, the door looks like a flat sheet of paper cut in the size of a door.



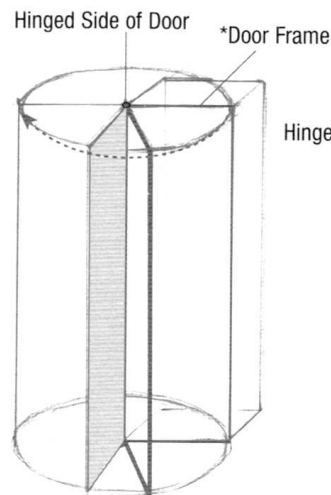
Draw a line to give the door thickness and then from its end, extend down another vertical line.



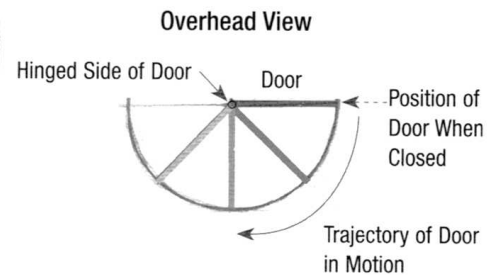
Add a doorknob to finish the door.



Opening the door wider than a 90° angle shifts the vanishing point to this side.



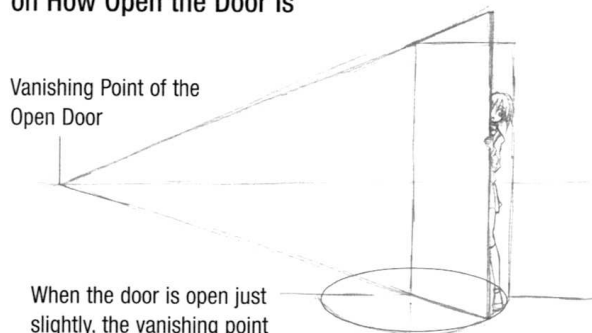
A door opens and closes with the hinged side as the pivot.



The ellipse that you draw for the door actually describes the door's trajectory.

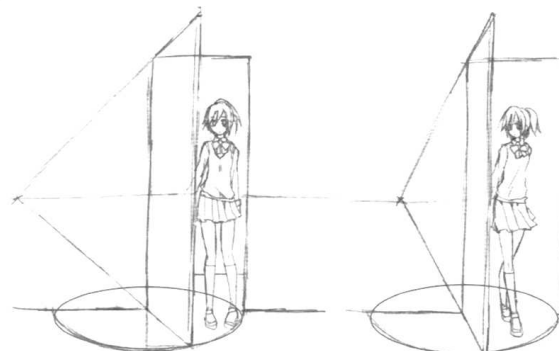


The Door's Vanishing Point Moves Closer, Depending on How Open the Door Is



Vanishing Point of the Open Door

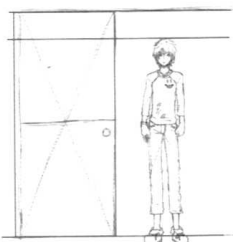
When the door is open just slightly, the vanishing point is located far from the door's hinged side.



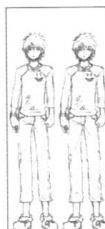
The wider the door is opened, the closer the vanishing point moves to the door's hinged side.

*The ellipse describing the door's trajectory or range of motion does not change, regardless if it is drawn above or below the door.

● Drawing a Character Standing in Front of a Door

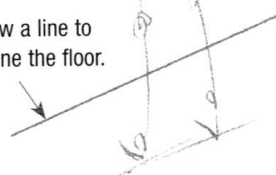


Size Contrast between the Character and the Door

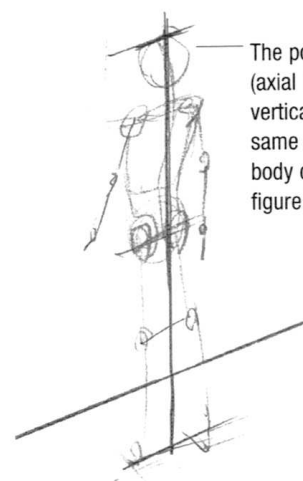


The door is approximately twice as wide as the character.

Draw a line to define the floor.



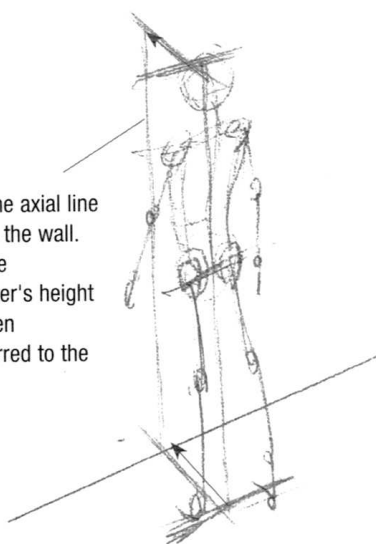
The standing character is directly facing the wall.



The posture line (axial line) is vertical. (It is the same as the stick body of a stick figure.)

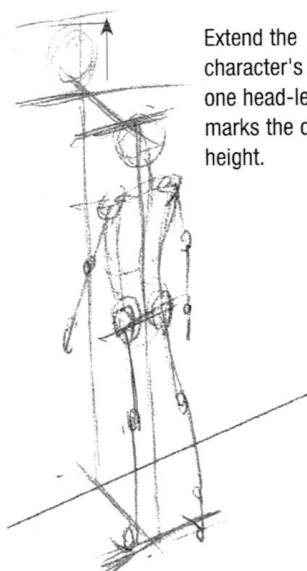
Sketch the character so that the lines connecting the feet and joints lie virtually parallel to the floor line.

Draw the axial line against the wall. Now the character's height has been transferred to the wall.

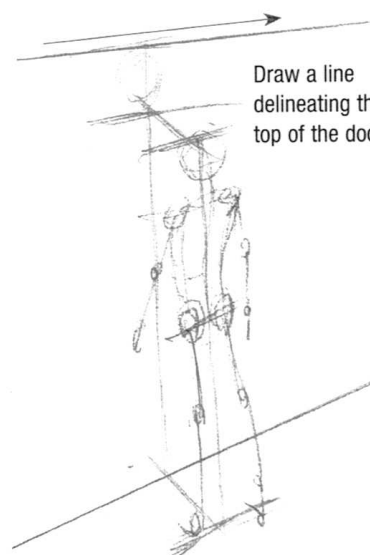


Have the character face the wall and laterally transfer the axial line to the wall.

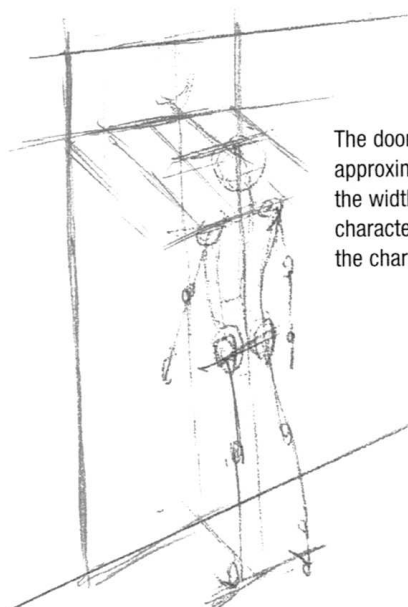
Extend the character's height by one head-length. This marks the door's height.



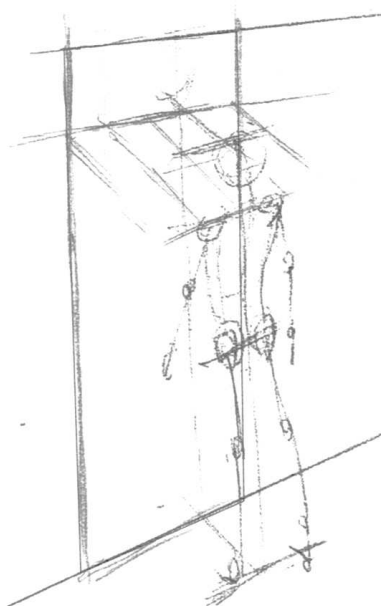
Draw a line delineating the top of the door.



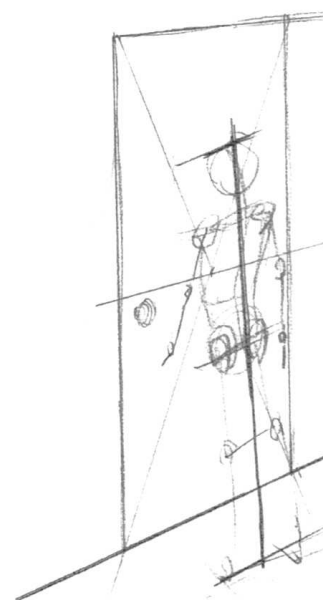
The door is approximately twice the width of the character, so double the character's width.



Now you have drawn the door frame.

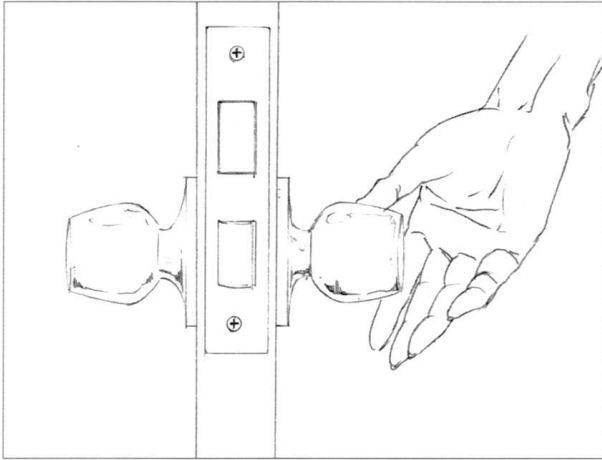


Position the doorknob just below center to finish the door.

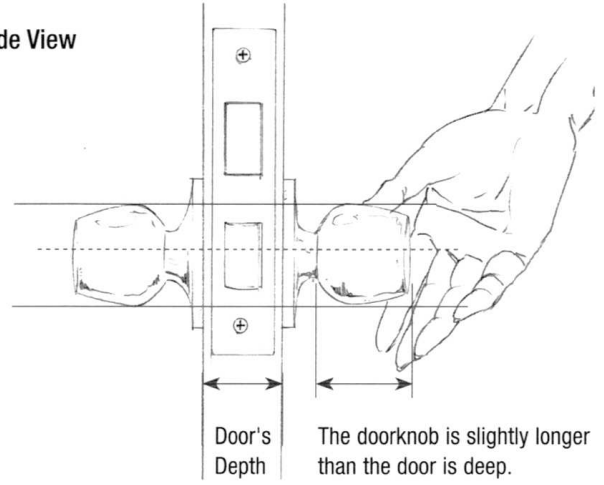


Doorknobs and Hands

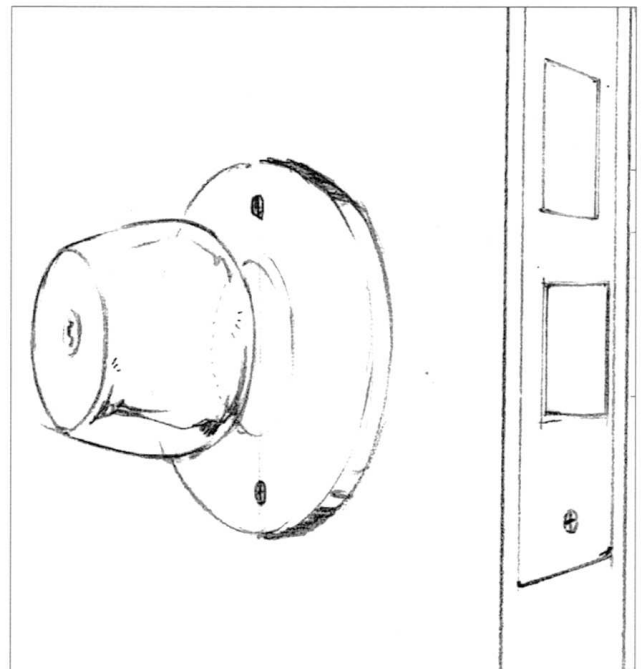
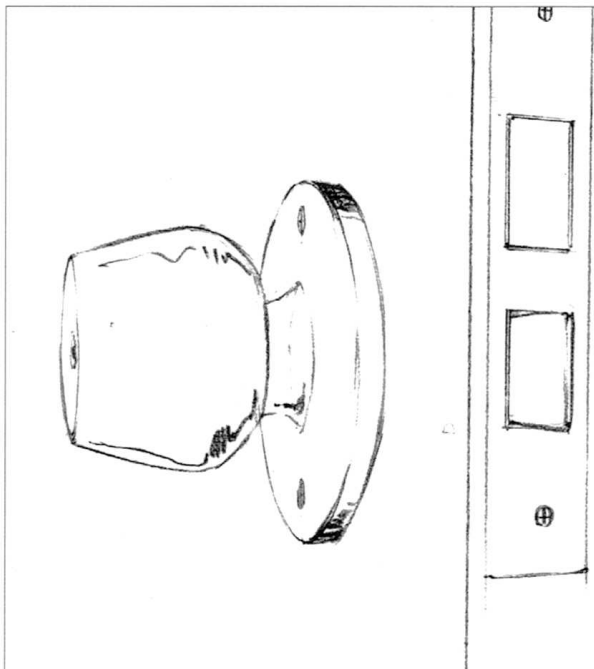
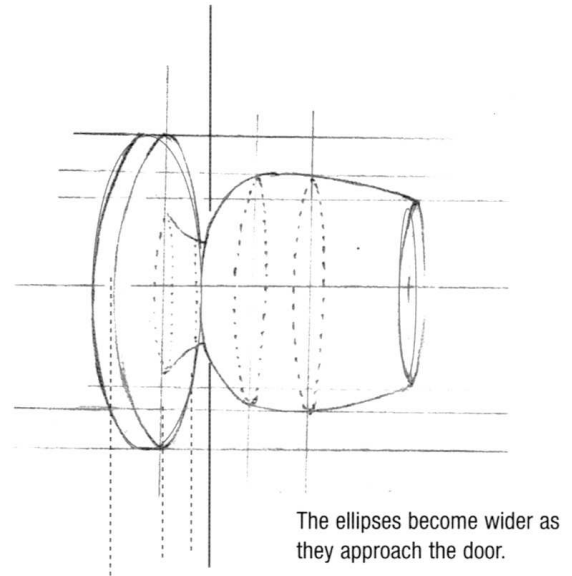
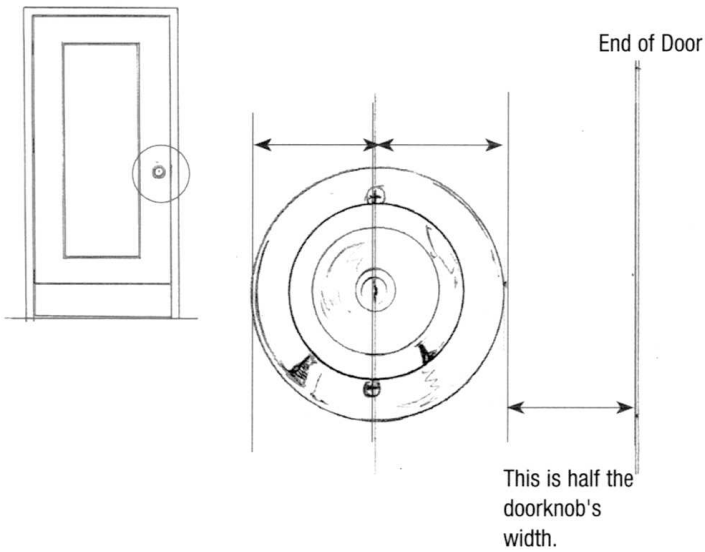
● Doorknobs and Surrounding Objects



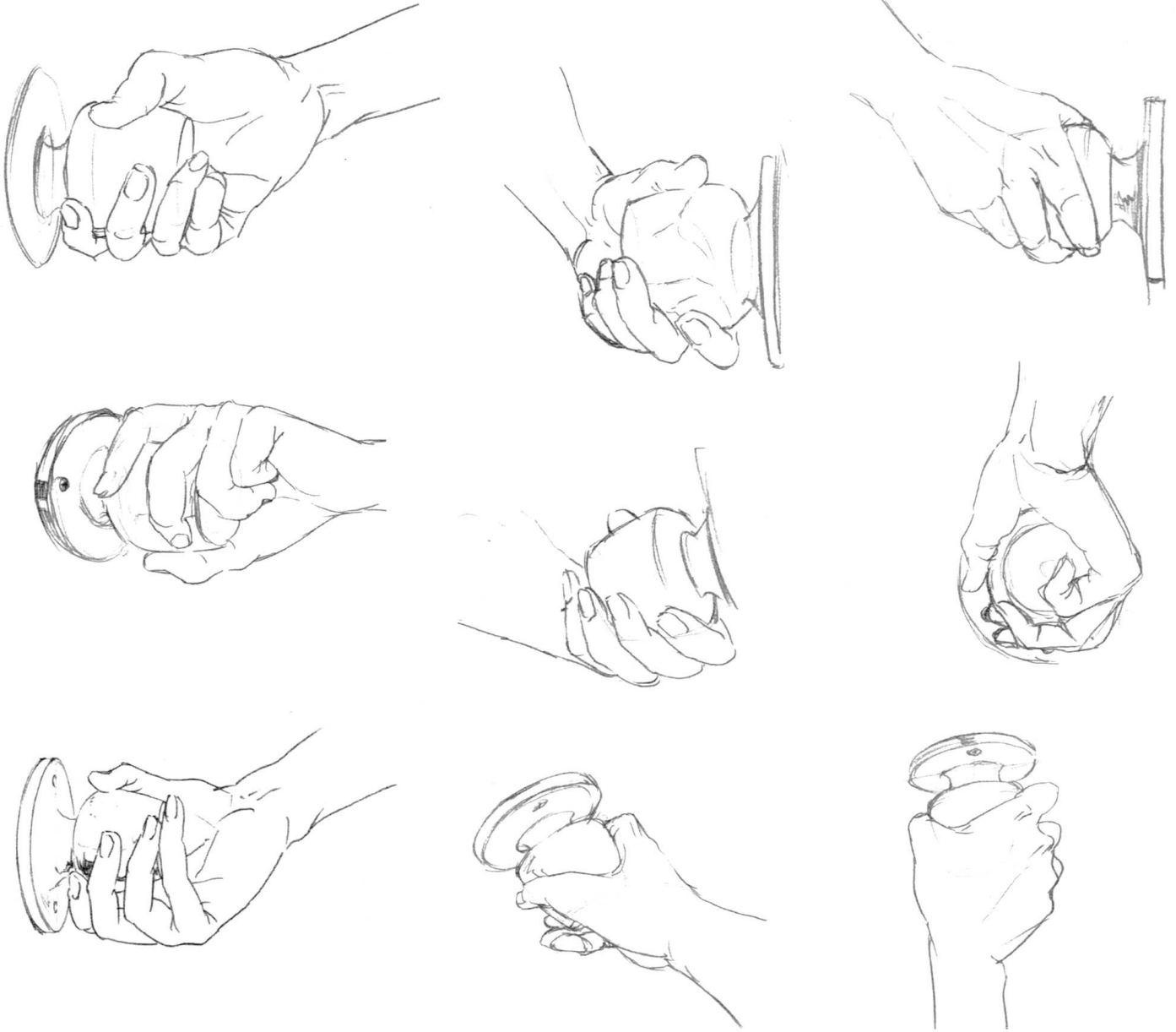
Side View



Front View

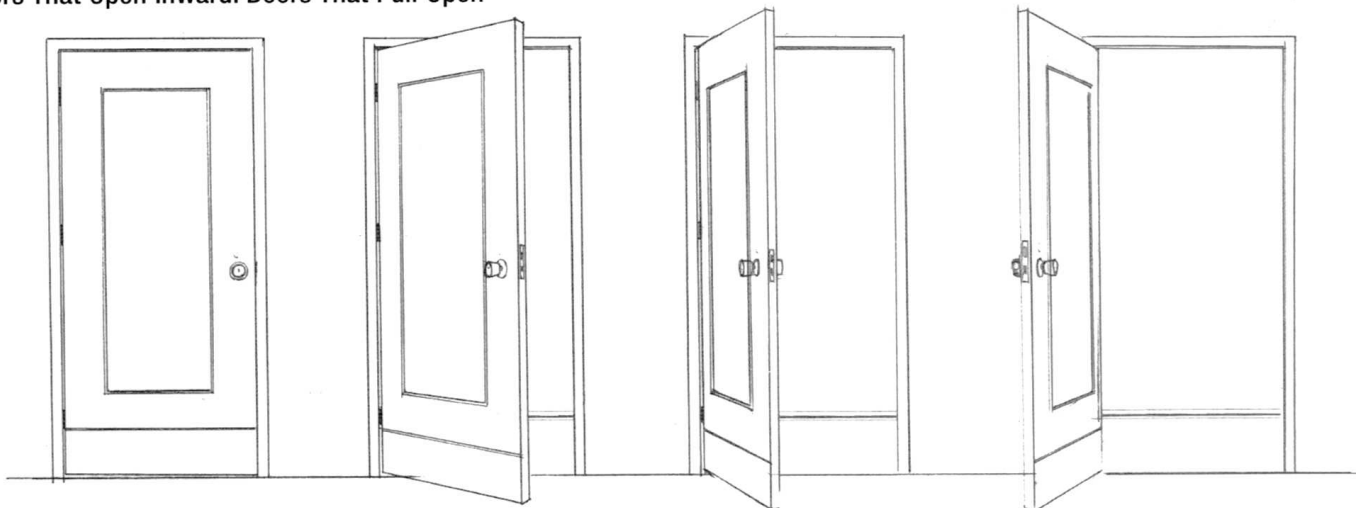


● Turning Doorknobs

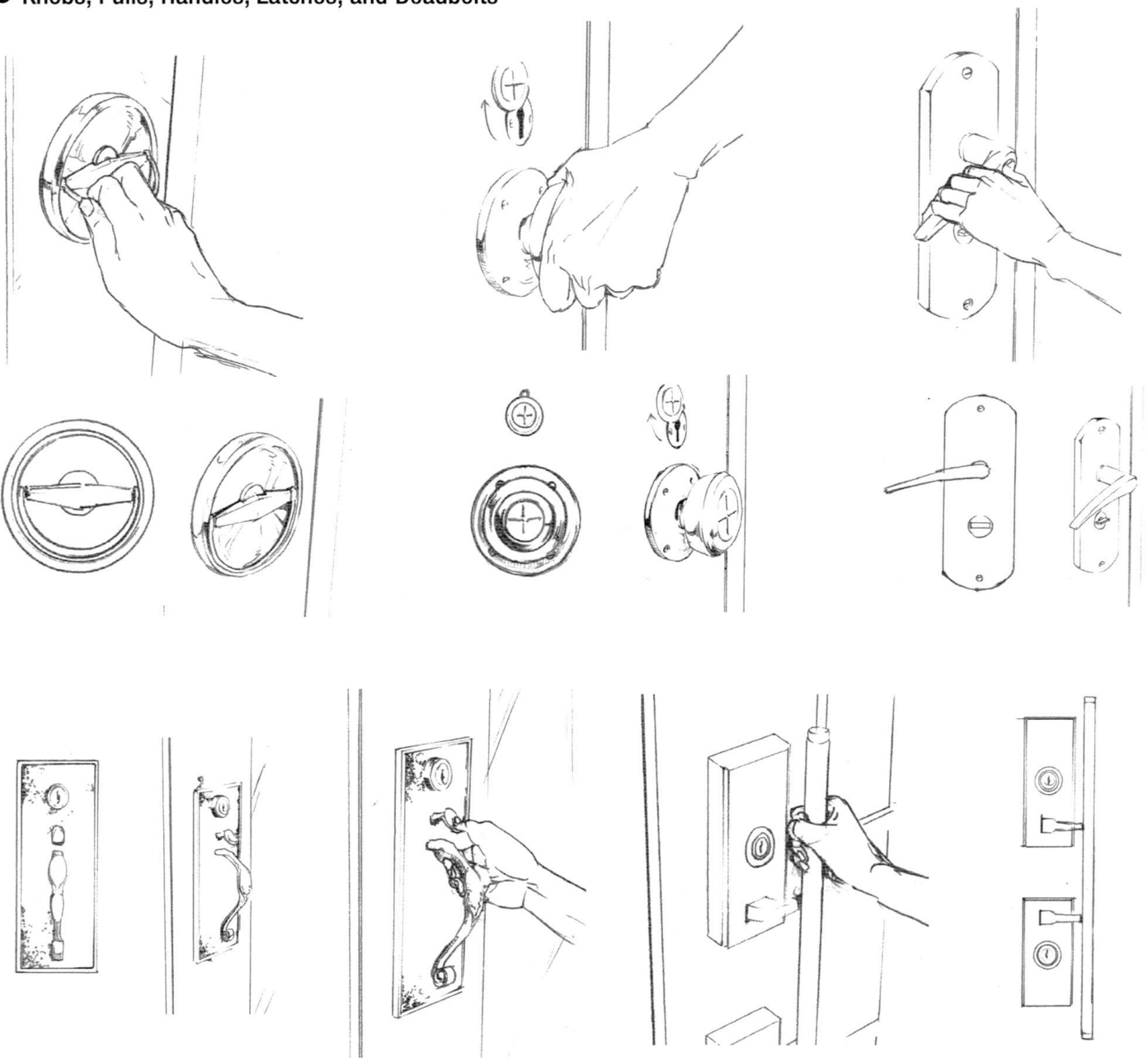


Opening Doors without Making a Sound

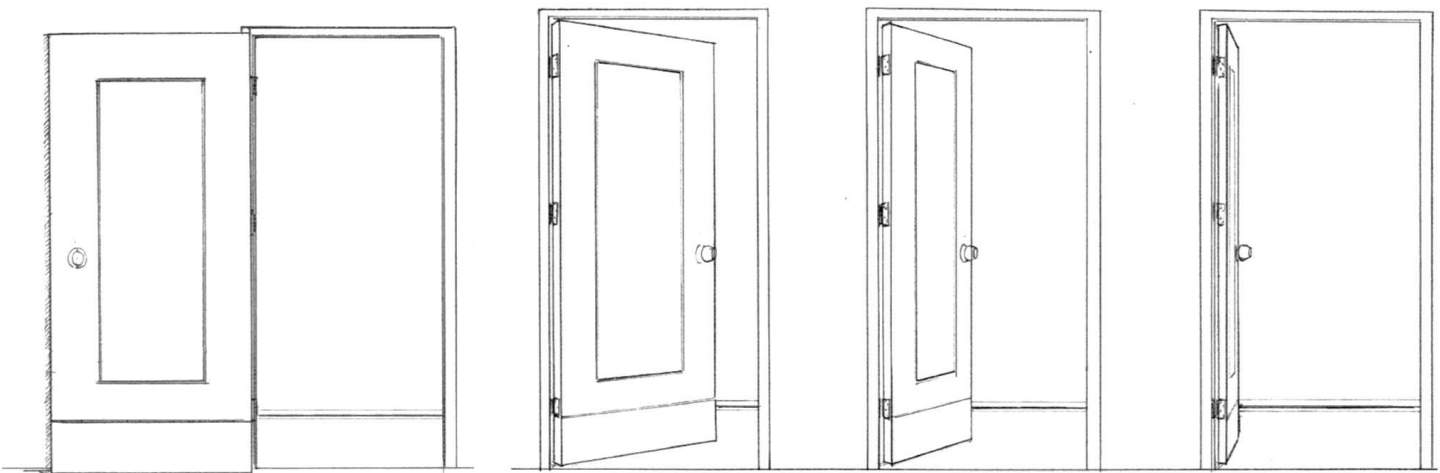
Doors That Open Inward: Doors That Pull Open



● Knobs, Pulls, Handles, Latches, and Deadbolts



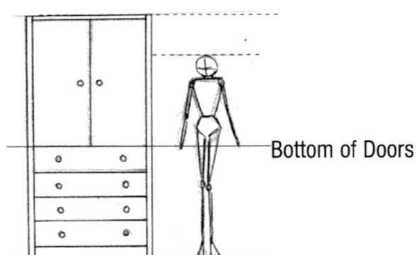
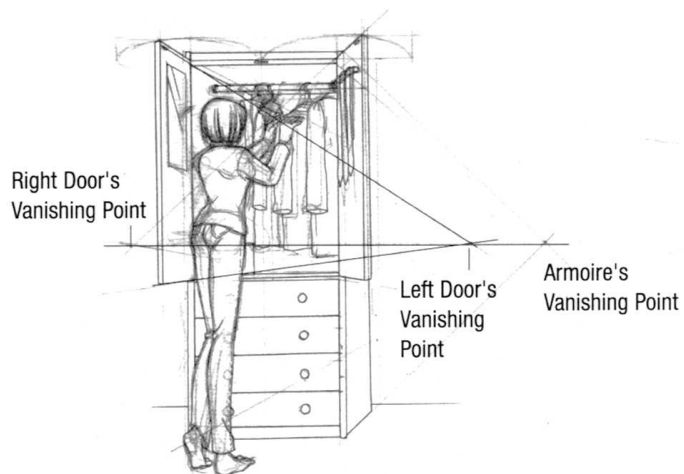
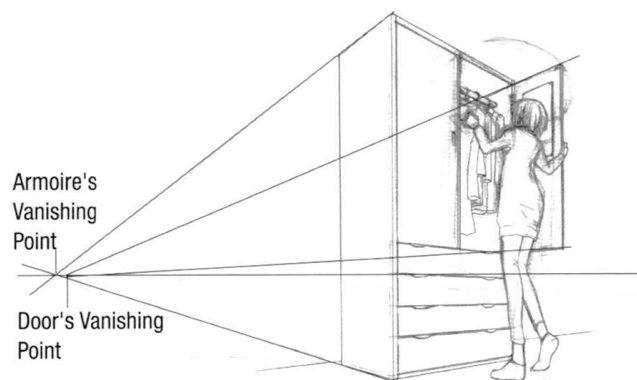
Doors That Open Outward: Doors That Push Open



Opening Armoires and Lockers

Use the same principles applied to drawing an open door. Think of an armoire as "a box with opening doors."

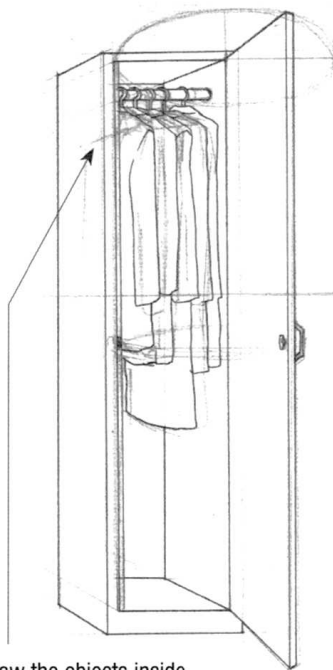
● Armoires



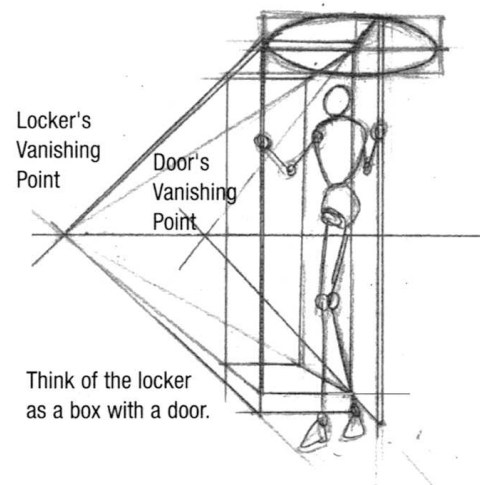
Scale of the Armoire and Character

● Lockers

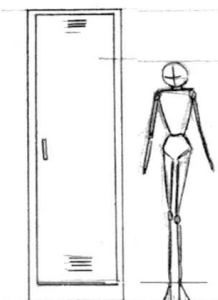
Opening Lockers



Draw the objects inside the locker to correspond to the vanishing point.

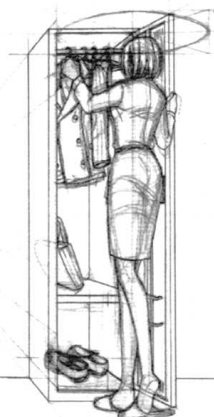


Removing Objects from a Locker

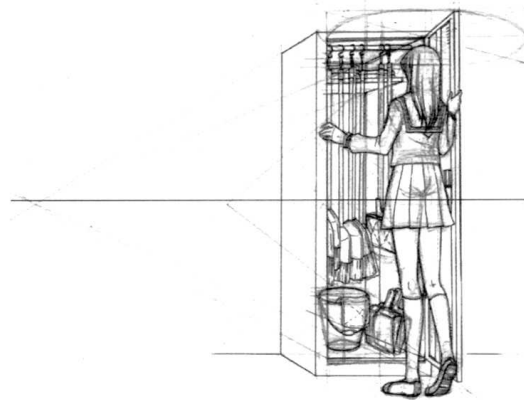


Scale of the Locker and Character

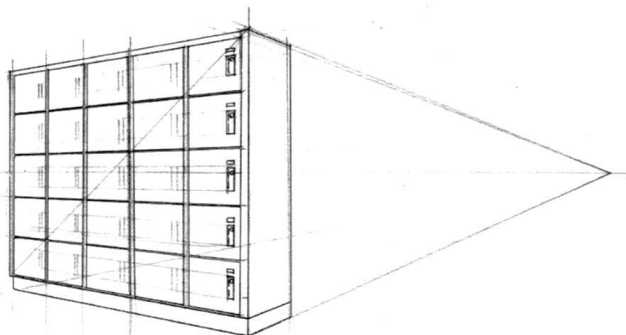
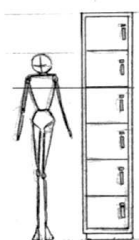
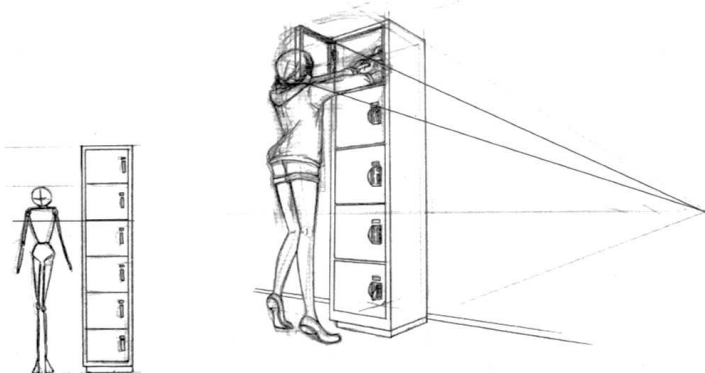
The vanishing points of the locker and its door are overlapping.



Janitorial Locker

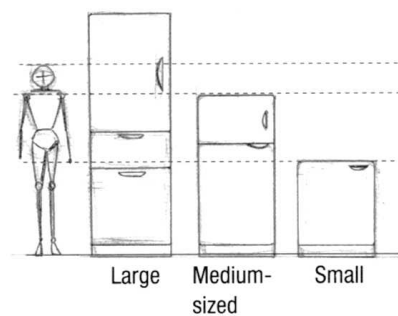
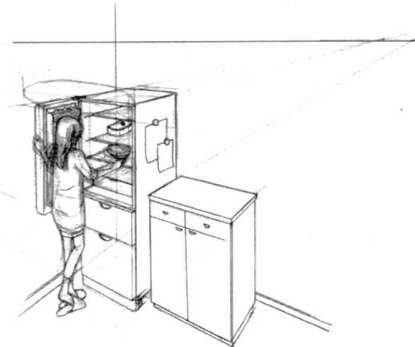
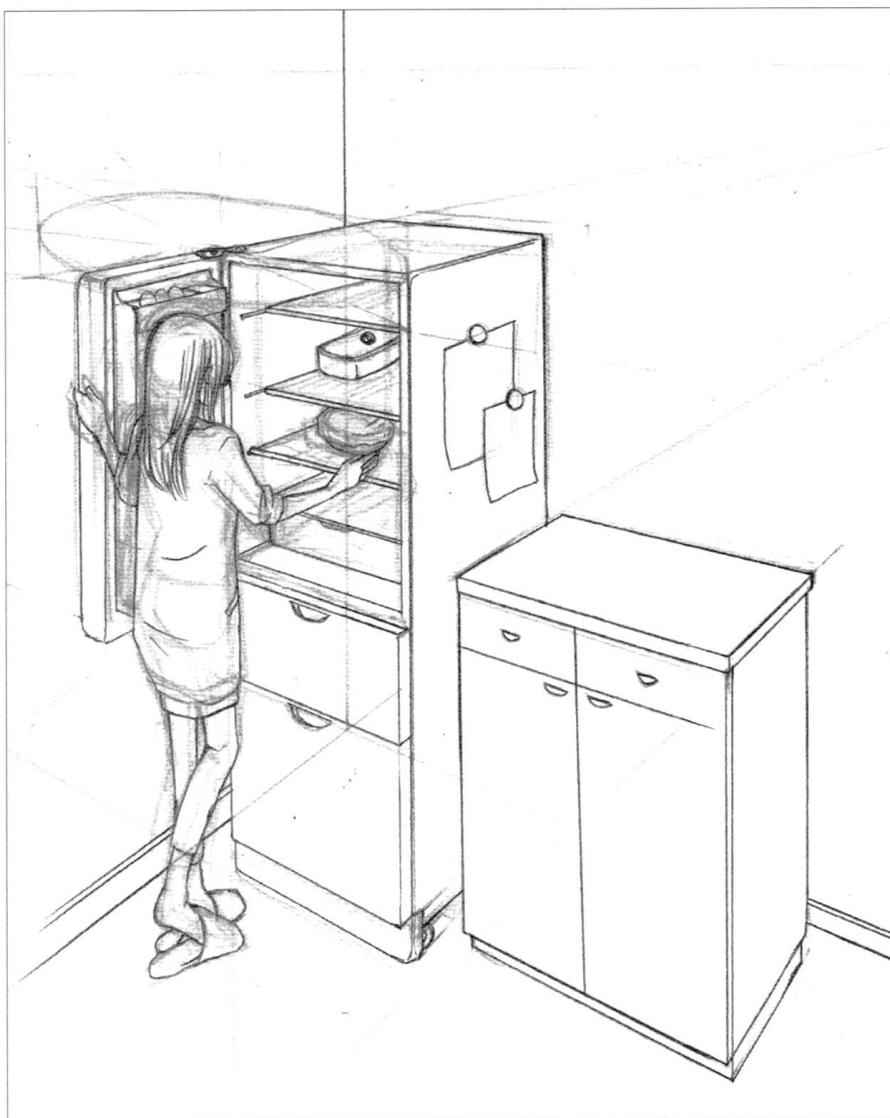


Coin-operated Lockers



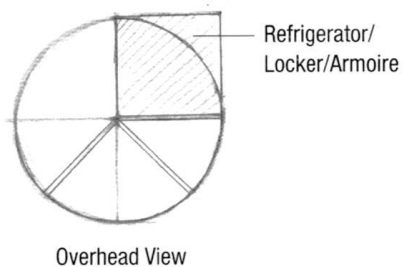
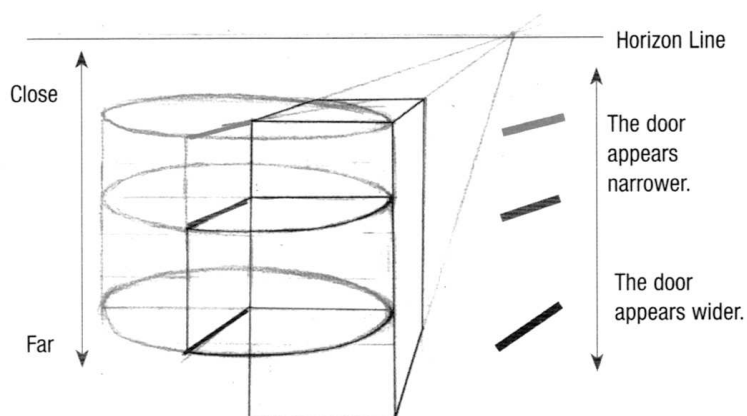
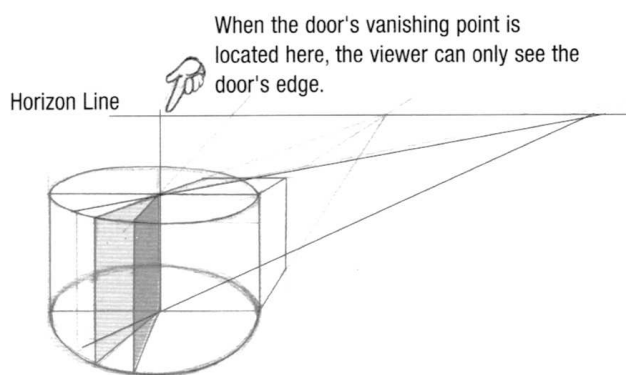
Use the "transverse line method" to draw the lockers.

● Refrigerators



Use the same principles applied to drawing the door of a house when showing changes in the refrigerator door's width.

Changes in the Refrigerator Door's Appearance



The further the viewer's eye travels down from the horizon line, the more the trajectory that the door describes moves from narrow to wide.

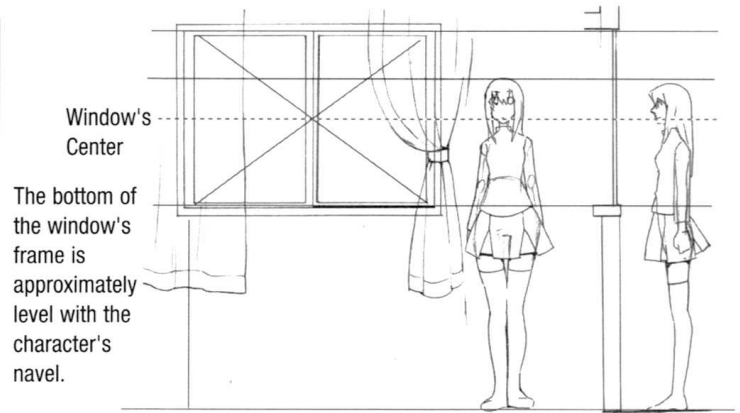


As the door's vanishing point moves further from the horizon line, the ellipse's radius becomes gradually longer (i.e. the door's width becomes gradually wider).

Windows and Characters

● Standing by a Window and Opening a Curtain: Gentle Movements

One-point perspective lends itself better to gentle movements, while two-point perspective is more suited to vigorous movements.

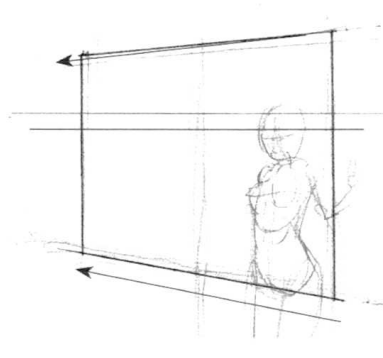


Scale of Window and Character

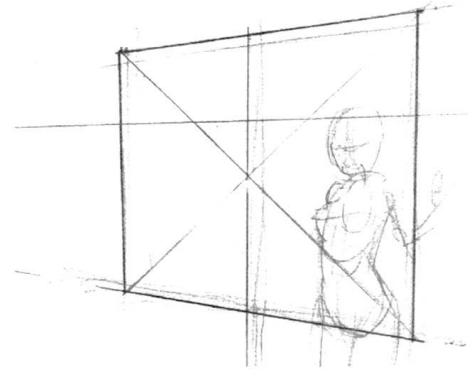
The Sketching Process



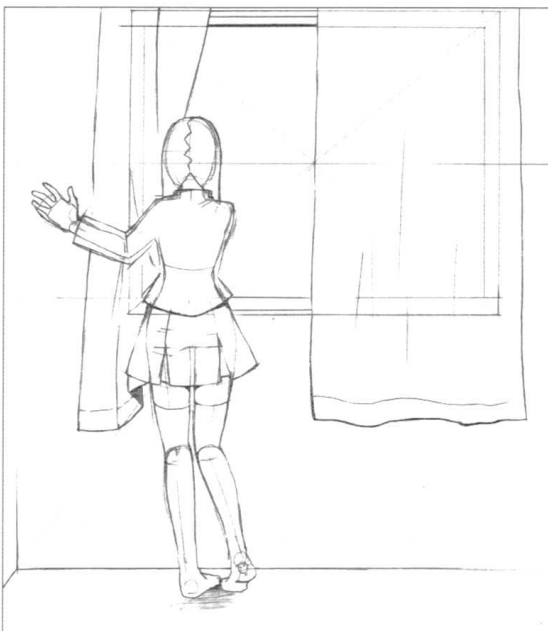
Produce a rough sketch that includes the ground line, the window's frame, and the character's full figure. Establish where the character will stand and visually balance this with the window.



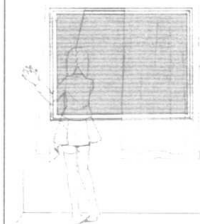
Draw the window frame.



Locate the window's center using the "X method."



Inside the Room



The above shows the portion of the window hidden behind the curtains and the character.

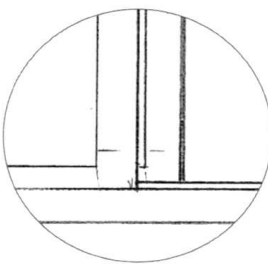


This shows the view from outside. When you sketch, include the character's hand and body below the waist, even though they will be obscured in the final composition. Always show consideration to proportioning and visual balance.

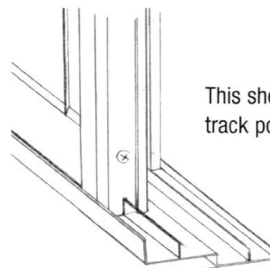
● Opening a Window: Gentle Movements



View from Outside



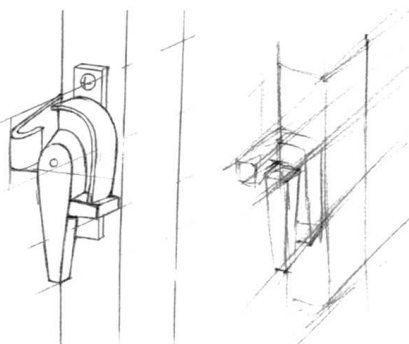
Take care to ensure that the two panes' sashes have the same width.



This shows the sash and track portion of the frame.

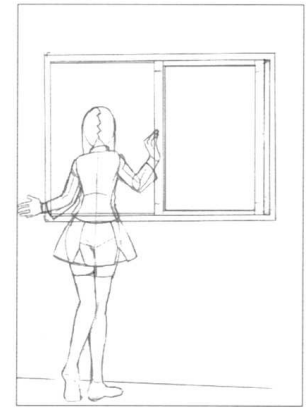


Exterior View



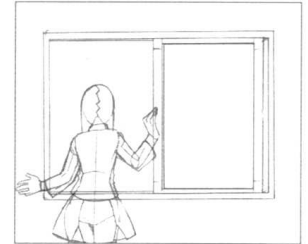
Draw the window's latch using parallel and vertical lines to achieve a three-dimensional form.

Incorrect

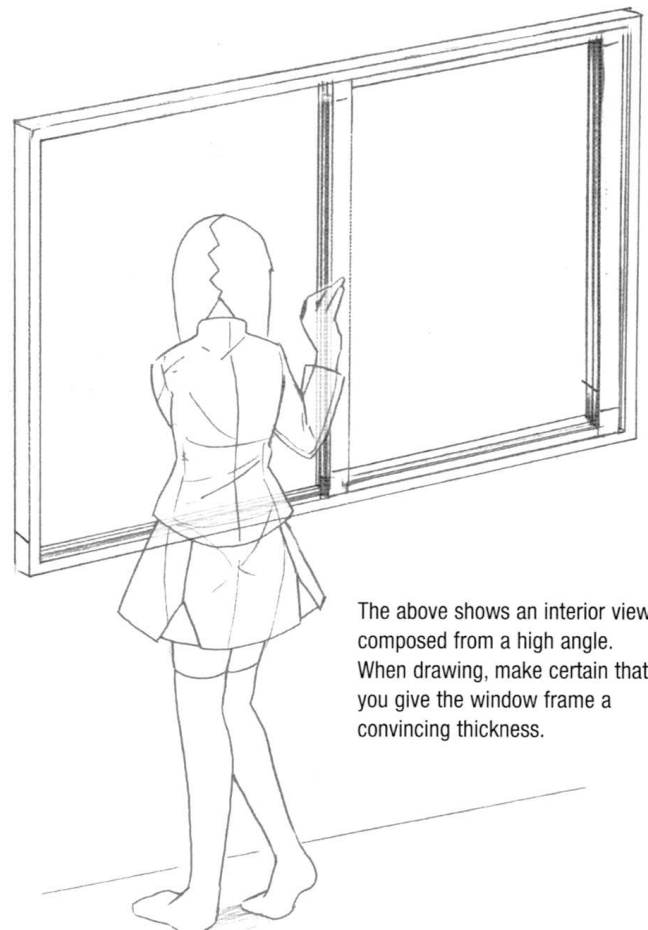


The above incorrect example shows the view from inside. The window frame is composed from a front view, while the floor line lies at an angle.

Correct



Trimming off a portion of the panel circumvented the problematic areas. Now that the viewer can no longer see the character's feet, there is no problem.

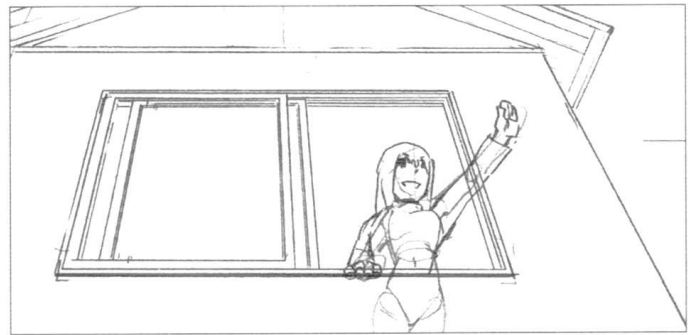


The above shows an interior view composed from a high angle. When drawing, make certain that you give the window frame a convincing thickness.

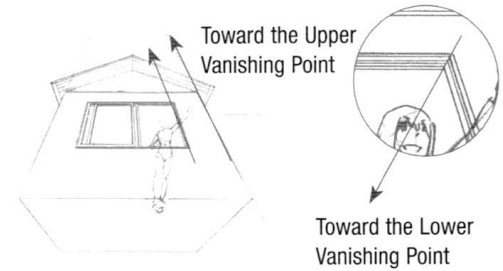
● Hanging Out of a Window: Vigorous Movements



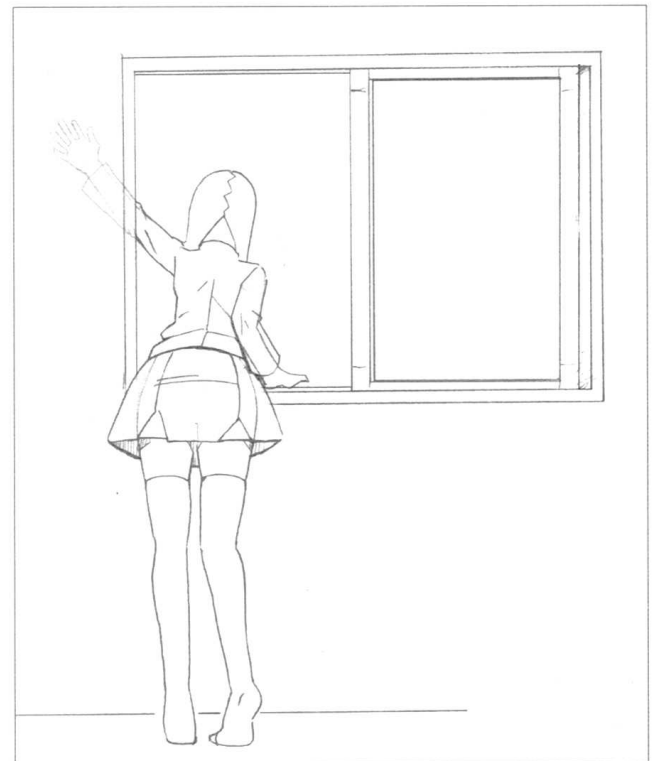
This exterior view was composed from a low angle using two-point perspective.



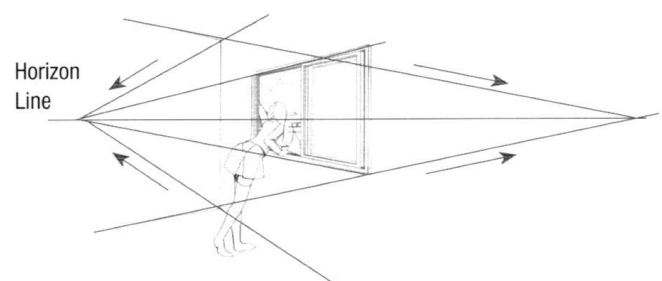
This shows an exterior view composed using a modified two-point perspective with vanishing points located above and below.



This interior view was composed in two-point perspective.



The above shows an interior view not drawn in perspective. The heel of one foot is raised, creating the impression that the girl is leaning out the window.



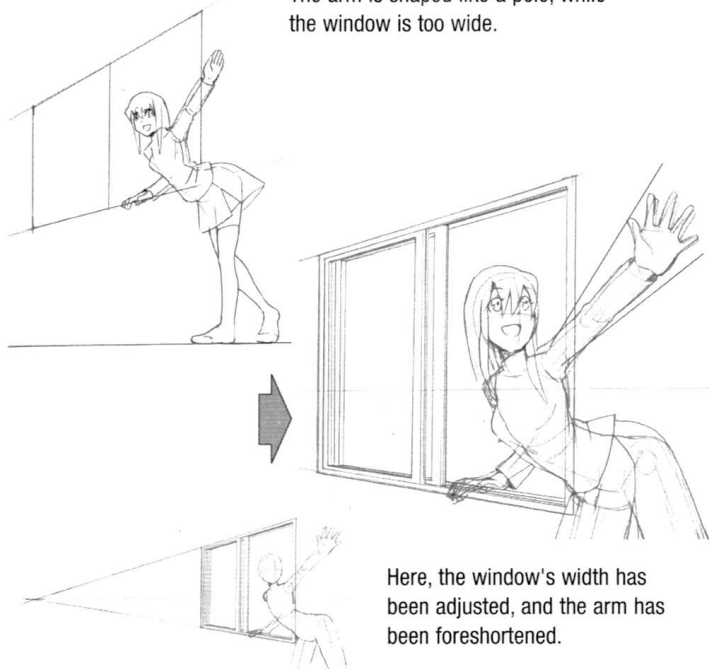
Correct



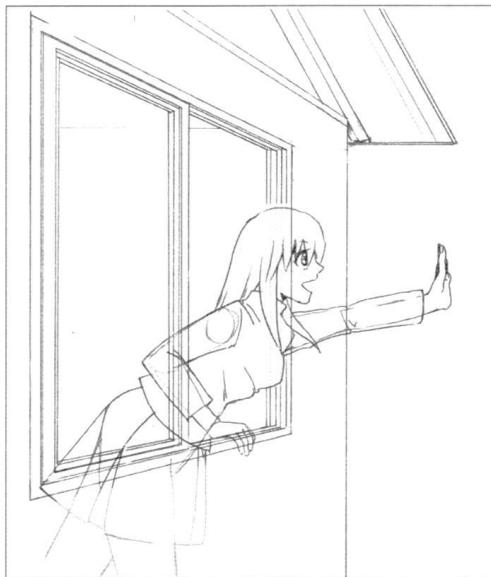
Exterior View

Incorrect

The arm is shaped like a pole, while the window is too wide.



Here, the window's width has been adjusted, and the arm has been foreshortened.



Exterior View

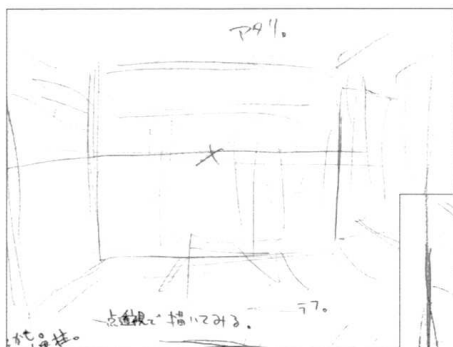
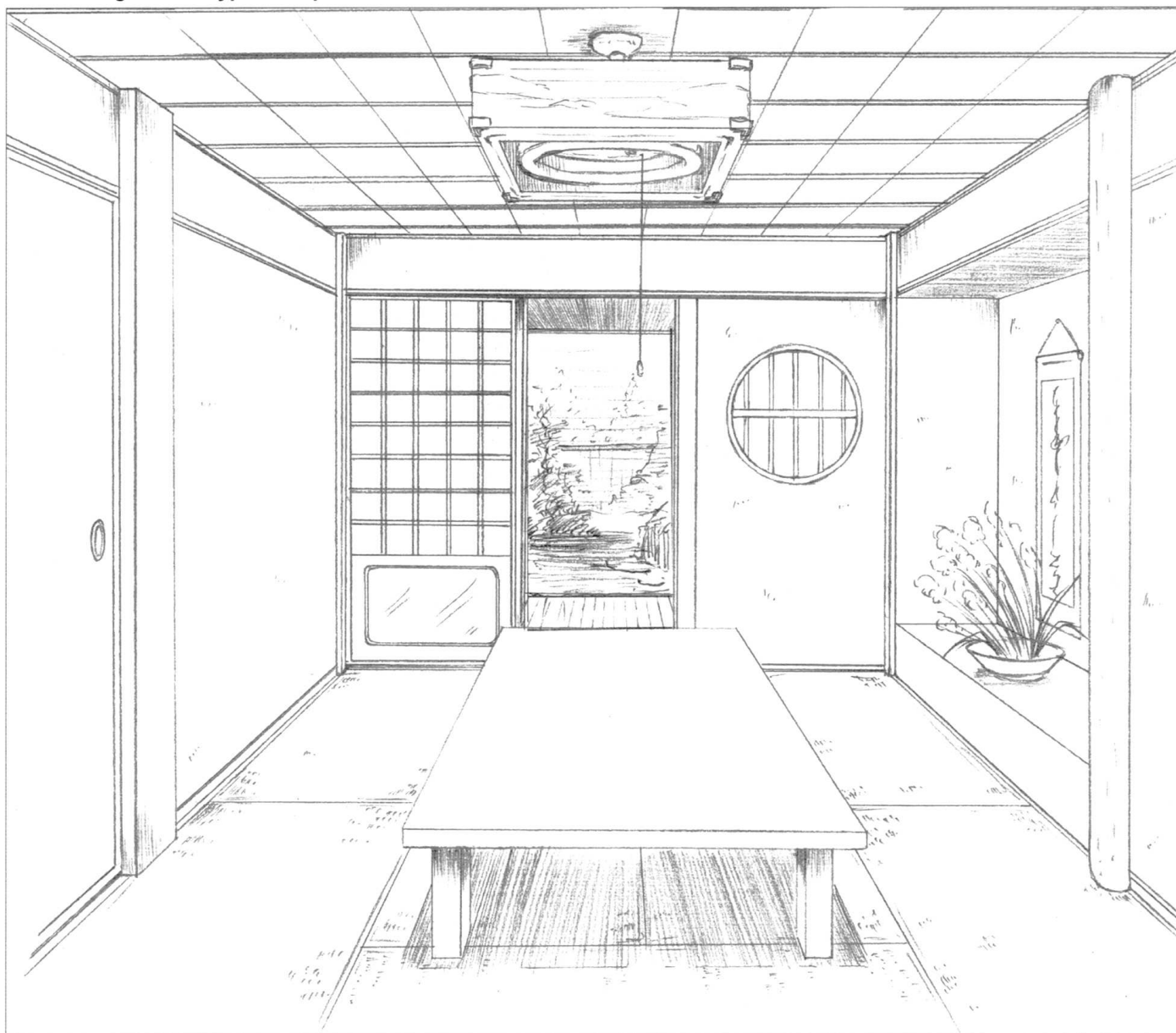


This shows just how far the girl is actually capable of leaning out the window.

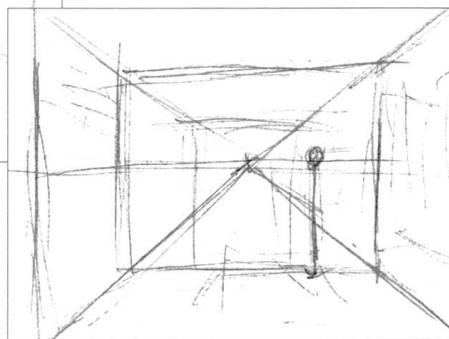


The above is an interior view composed at a low angle and drawn in two-point perspective.

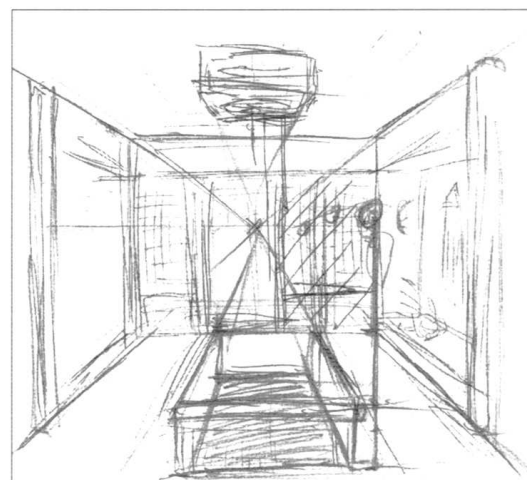
● Drawing a Prototypical Japanese Room



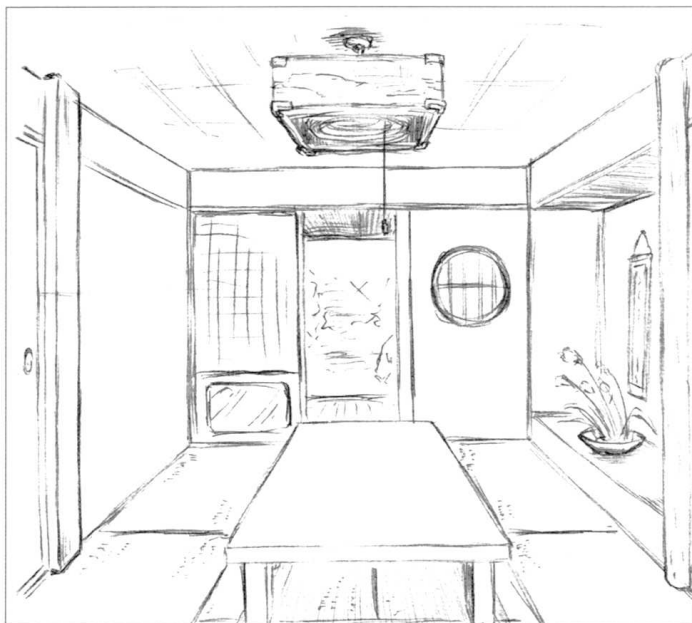
The above is a rough sketch. Simply sketch the scene in general terms. Establish where to locate the horizon line and vanishing points at this stage as well.



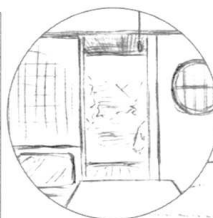
Sketch rectangles to determine how expansive to make the room, and draw the lines defining the ceiling and floor from the vanishing point.



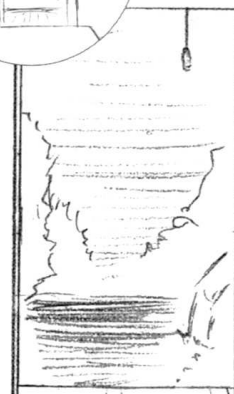
Transfer a mock-up figure from the back wall to the foreground to double-check the heights of the table and ceiling.



Establish the general contours of objects and then add the details and finishing touches.



Close-up
This shows the exterior view, visible from the open *shoji* (sliding doors made of translucent paper).

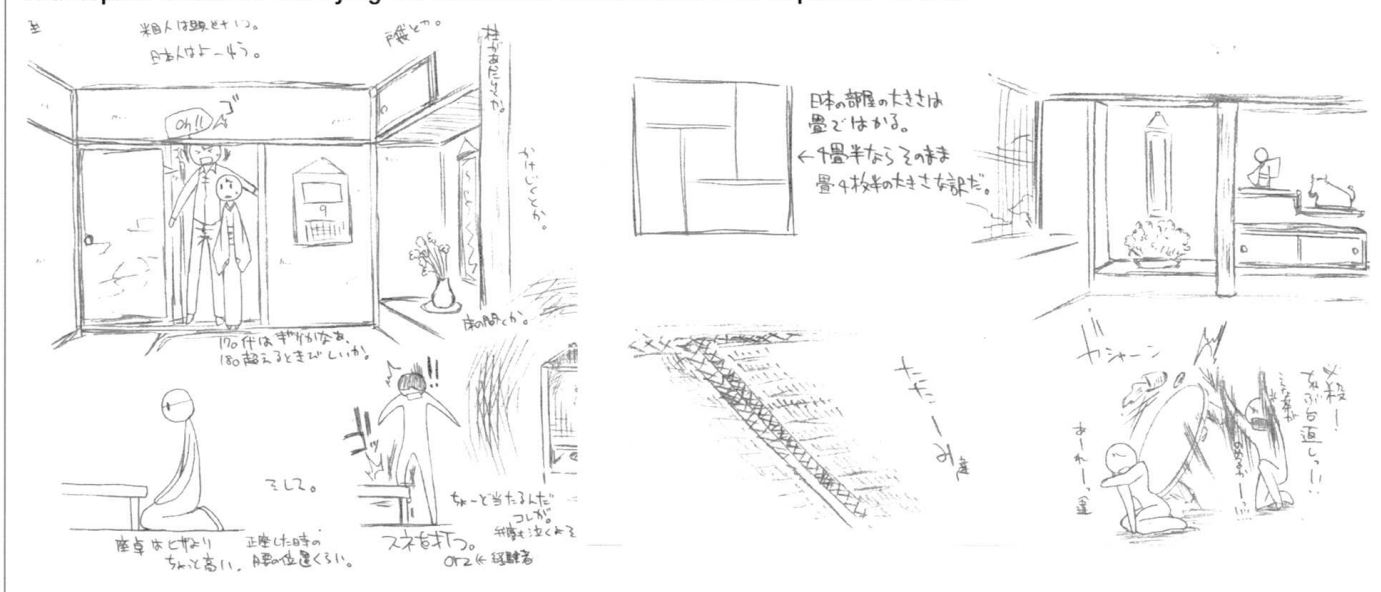


The view contains trees rendered with vague silhouettes and hatched lines.

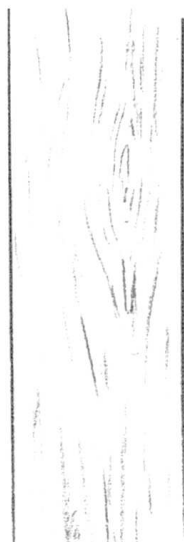


The artist maintained a visual picture of a garden's trees, stones, and walls, and modulating the use of black and white to achieve a sense of depth.

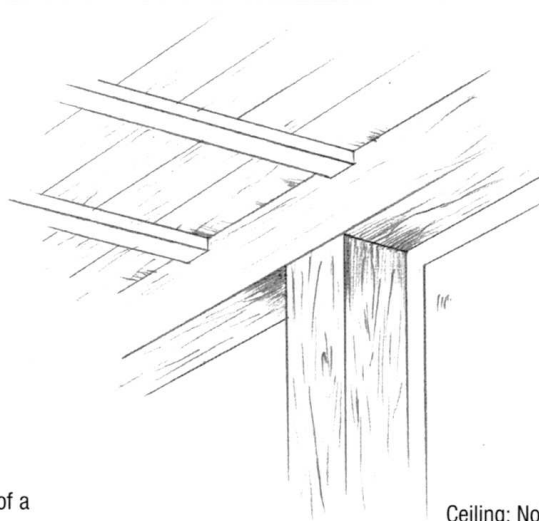
Thumbprint Sketches Clarifying the Distinctive Characteristics of Japanese Rooms



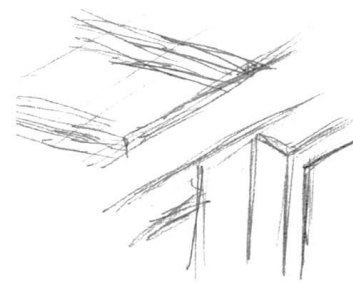
Achieving a Convincingly "Japanese" Atmosphere: Portraying Wood



The Wood Grain of a Support Beam



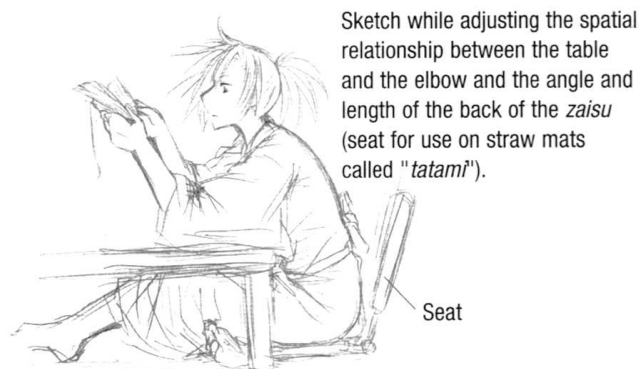
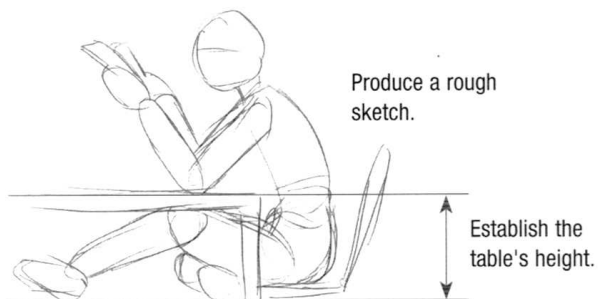
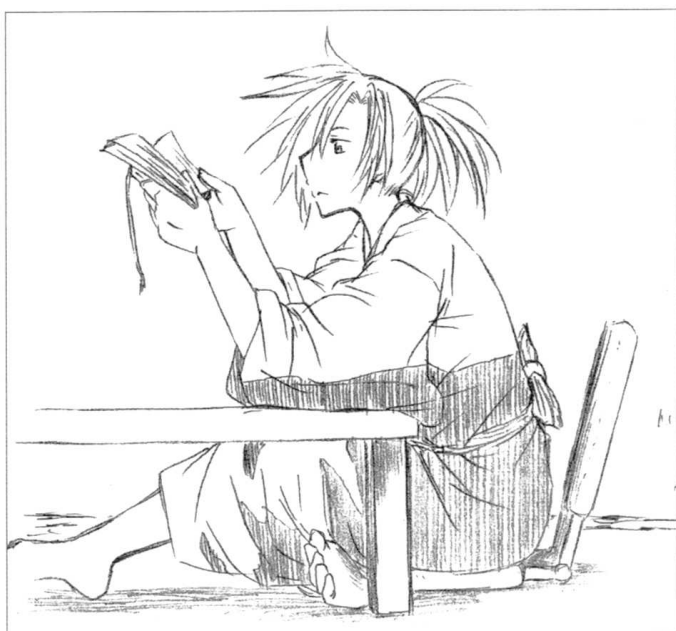
Ceiling: Note the portrayal of the joists and beams.



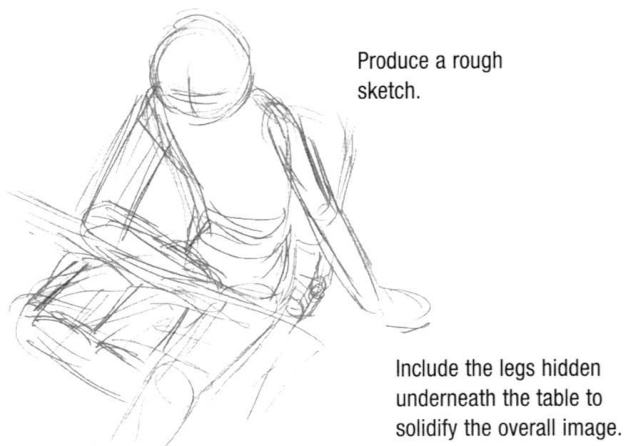
Try to capture the look of timber or wood when producing a rough sketch of thick beams and thin panels.

● Drawing Characters in Japanese Rooms

Reading While Seated at a Table I: Profile View



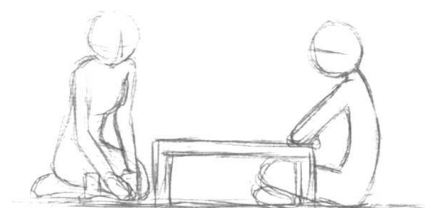
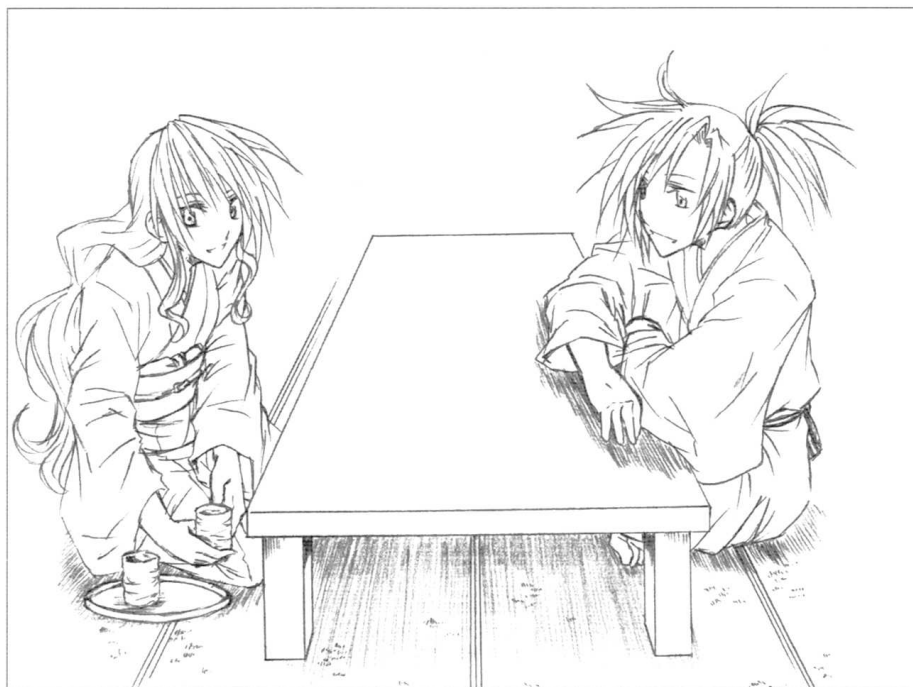
Reading While Seated at a Table II: High Angle



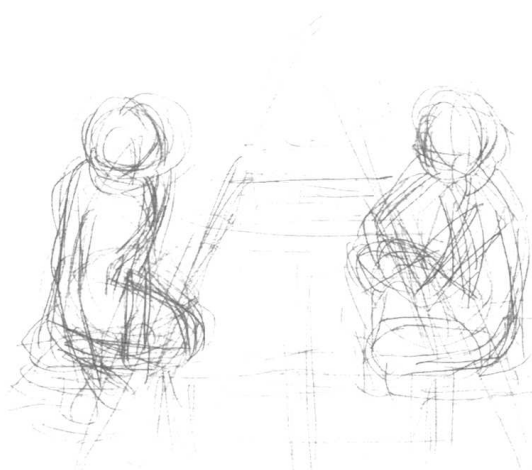
Sketch the figure as a manikin to help you adjust the spatial relationship between the table and the character.



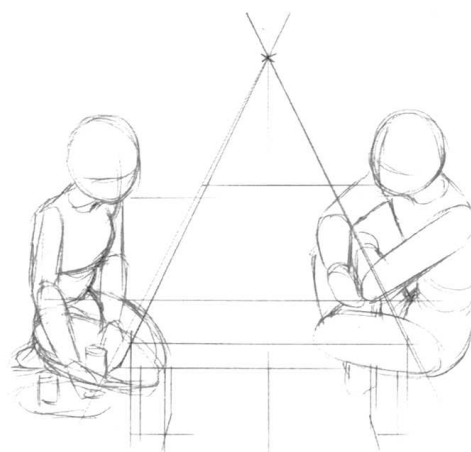
Two Characters Seated, Facing One Another



Produce a rough, layout sketch of the scene to help establish the table's height and the spatial relationship between the two figures.



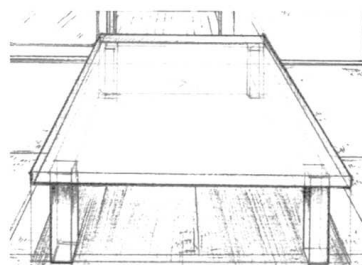
Roughly sketch the characters, while visualizing the perspective you intend for the table.



Decide where to locate the vanishing point and draw the table. Sketch the characters as manikin and establish the poses, carefully drawing the figures' joints first.

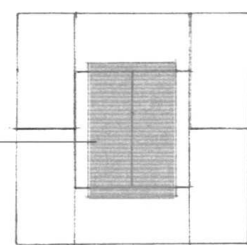


Fill in the details on the characters.



Transparent Perspective Projection of the Table

Guide for Scaling the Table



Tatami (Mat) Layout

Schools

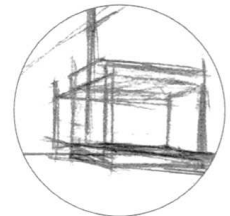
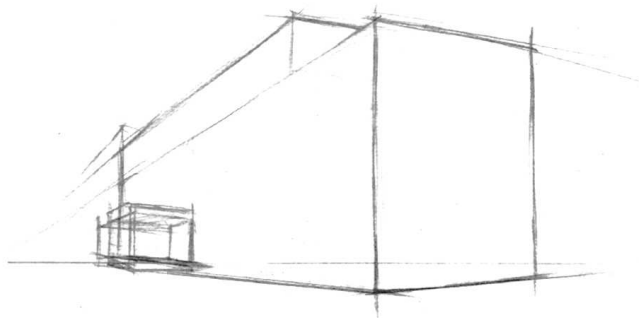
Two-point perspective is effective for evoking the illusions of expansiveness and depth, which are the impressions that large buildings, which many people occupy, and large roofs tend to project.

Exterior View

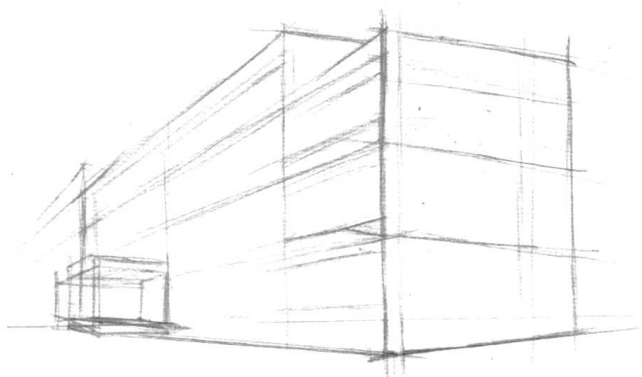
Use the same techniques to draw a school as you would to draw a building. Start by dividing the school into even stories.



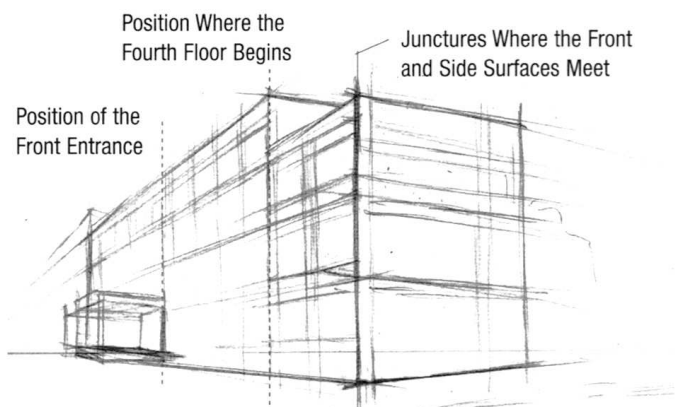
Reference Photo



Establish the overall form based on a reference photo. Use the front entrance as a basis for establishing the height of the structure itself and for the division of each floor.



Divide the structure into floors, using simple forms.



Establishing the divisions between each floor, keeping in mind where the front entrance will be located, where the fourth floor will begin, and where junctures between wall surfaces meet.

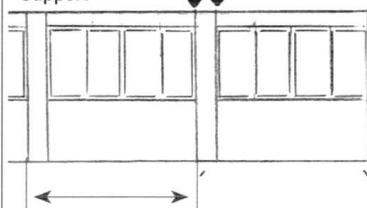
Clay Tile Roofs

How to Accurately Determine the Spacing between Columns, Projecting Supports, Etc. of Buildings Drawn in Perspective



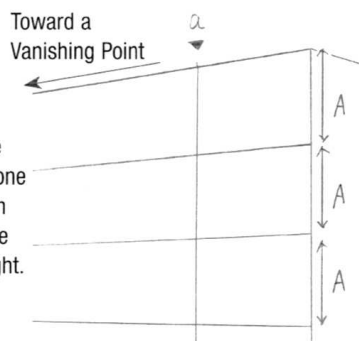
This can be drawn from a front view.

Projecting Support

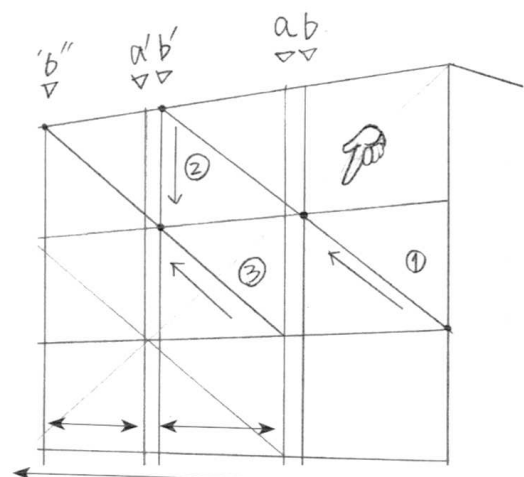


This is the height of one story. Each story is the same height.

You will need to draw this distance accurately in perspective.



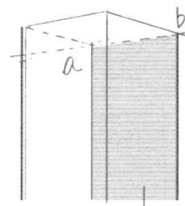
To draw this distance accurately, you will need to first divide each story evenly into distance (A). Next, establish where each projecting support will be positioned at Location a.



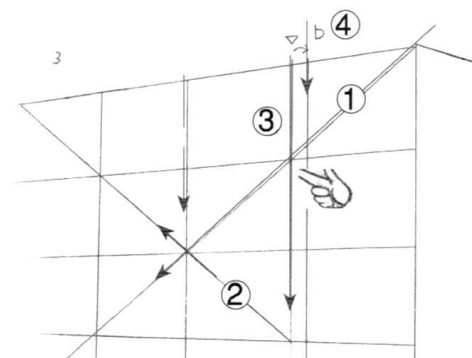
Each segment grows gradually narrower.



The farther the building moves away from the picture plane, the closer together the projecting masonry supports appear to lie. To reproduce this effect accurately, you will need to establish firmly each support's depth.

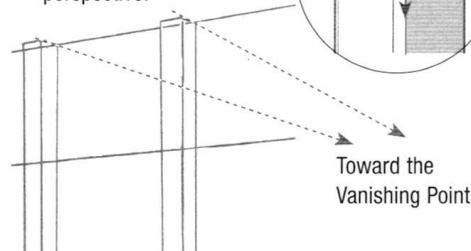


Support Depth



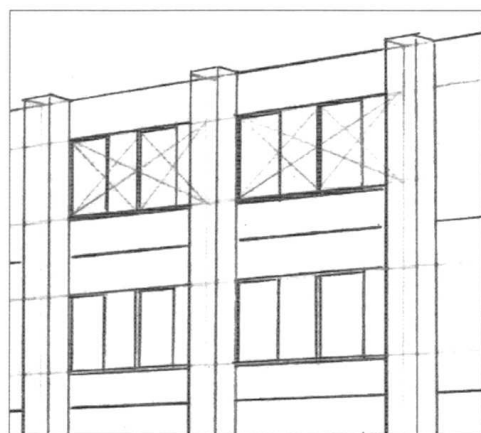
Then, using the "transverse line method," divide the school's front into even rectangles [① through ③]. This establishes where a projecting support divides up the school's front. Next, draw a vertical line ④ to establish how wide each projecting support will be.

Draw the projecting masonry supports, showing consideration to perspective.

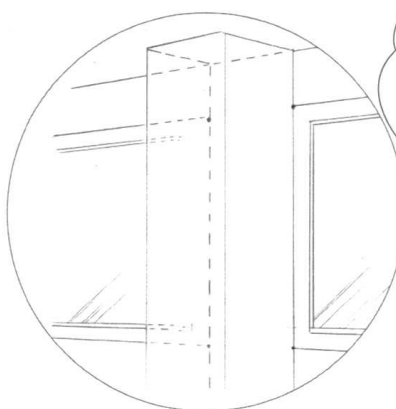


Toward the Vanishing Point

The distance between a and b defines each projecting support's width. Once again, use the "transverse line method" to draw b on the school's front. Now you have established the depth of each projecting masonry support.

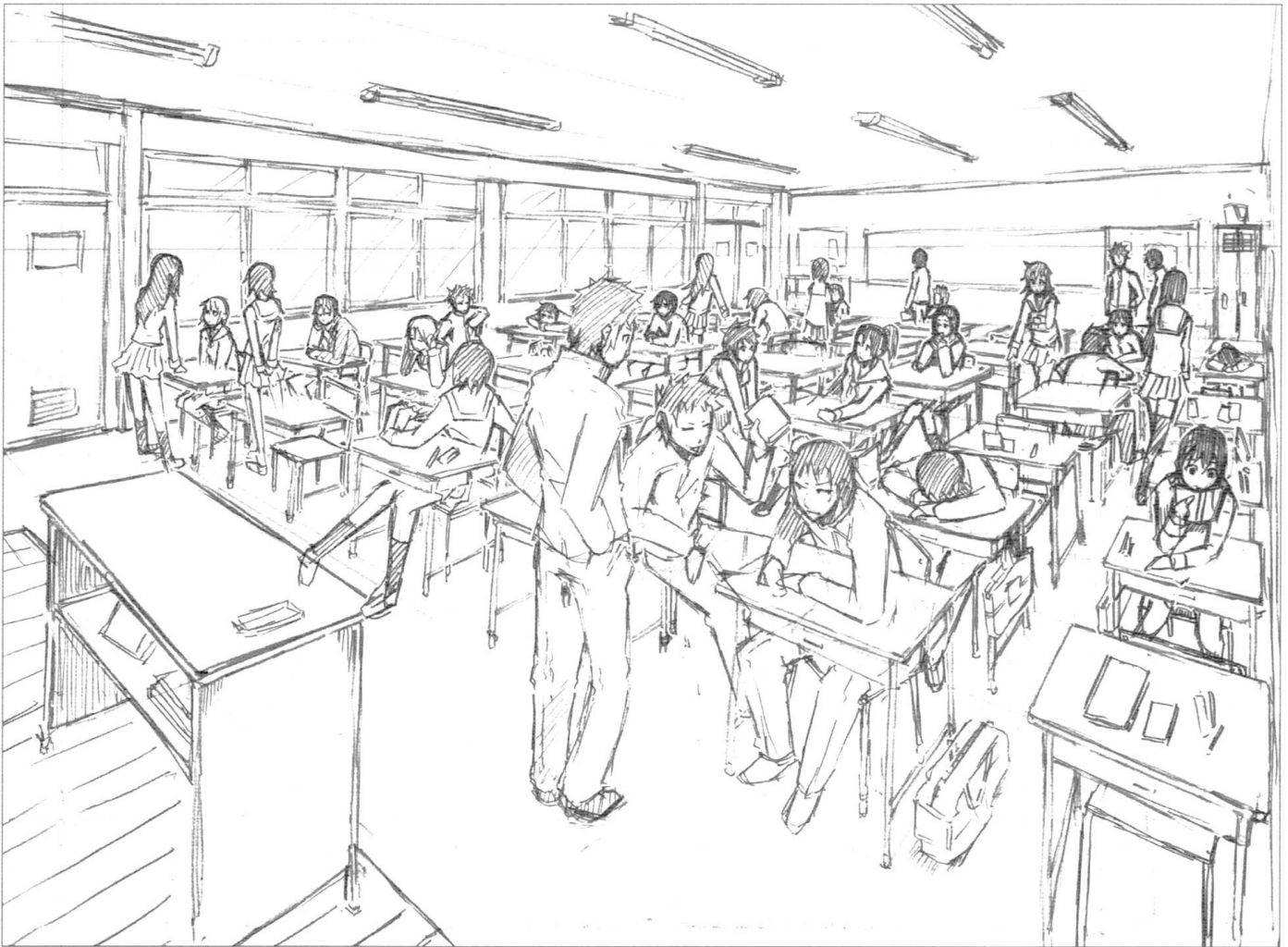


Final Composition

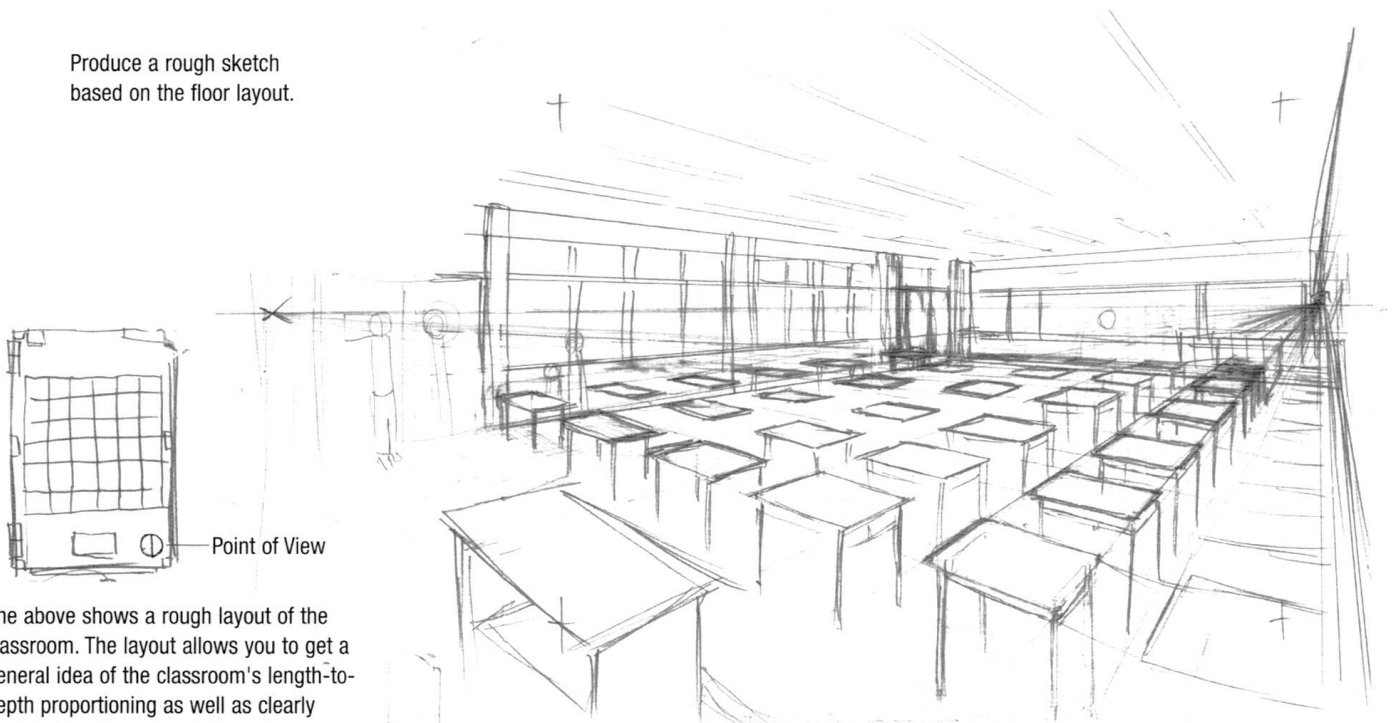


Sketch the whole window, including those parts that will be hidden behind a projecting masonry support in the final drawing.

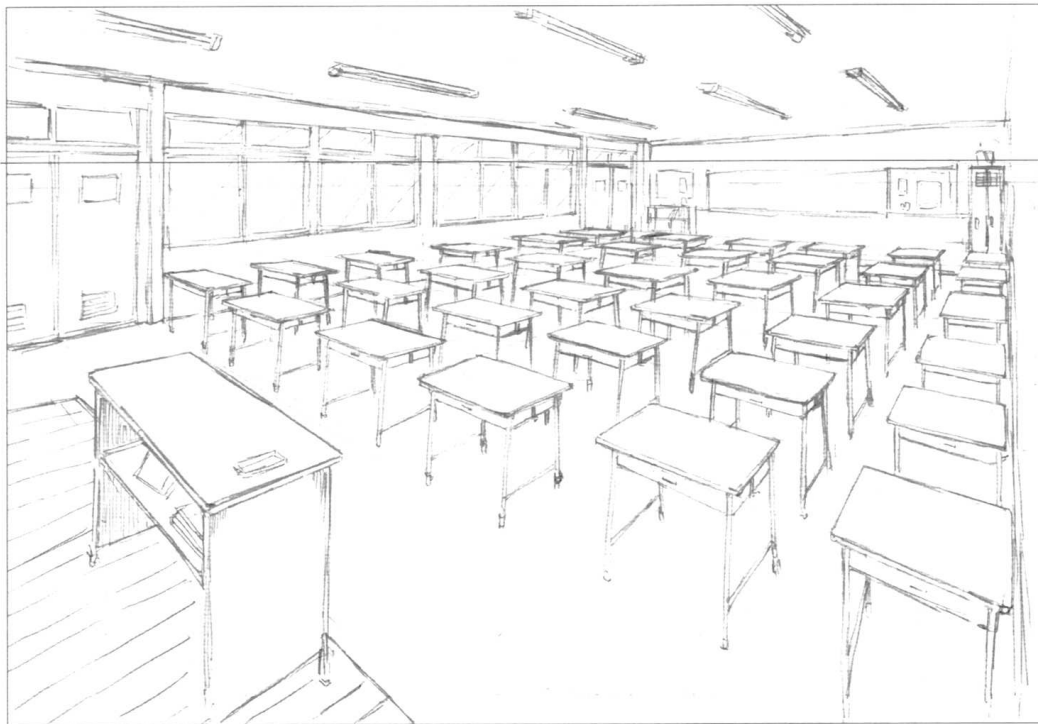




Produce a rough sketch based on the floor layout.



The above shows a rough layout of the classroom. The layout allows you to get a general idea of the classroom's length-to-depth proportioning as well as clearly establishing the point-of-view. Use a checkerboard pattern to represent the desks.



Horizon Line

The horizon line is located one head-length above a standing figure's head.



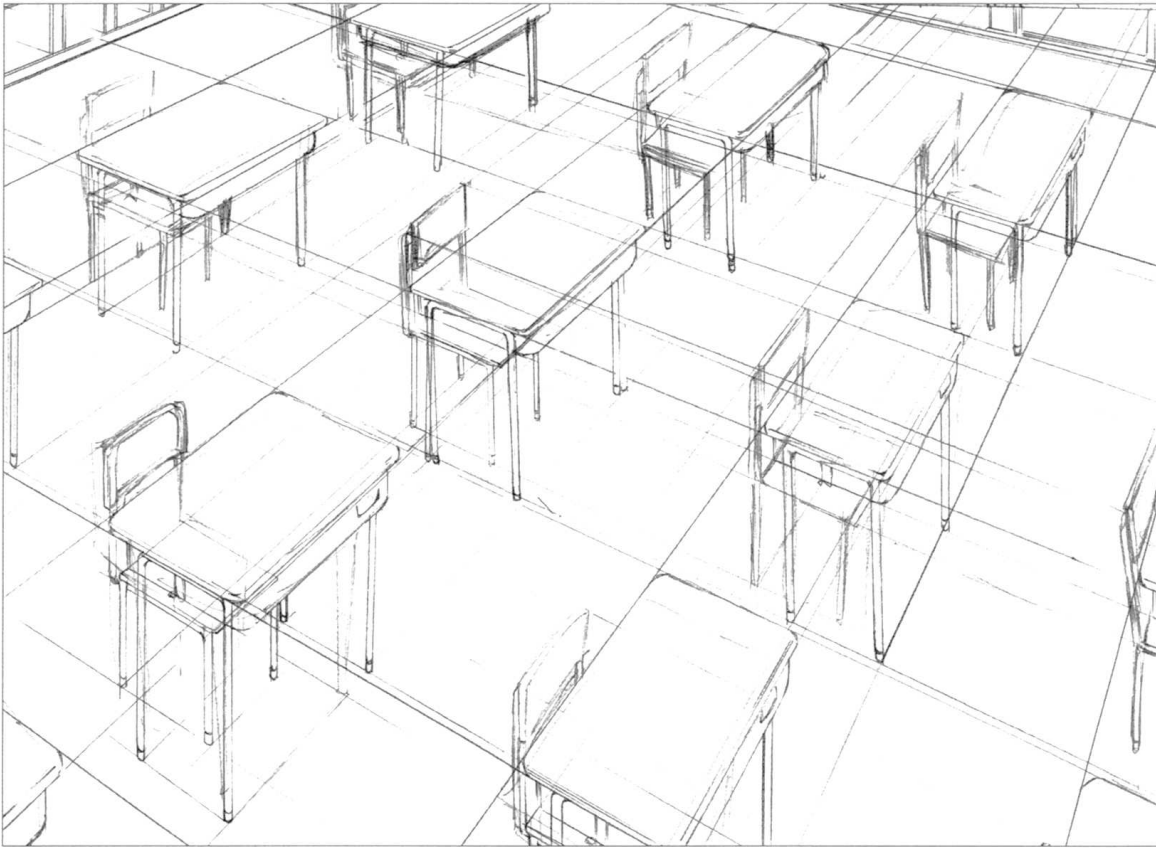
Final Composition

● Positioning Characters: Aligning Character's Faces along the Horizon Line



Drawing figures sitting, standing, and engaging in a host of other activities enriches the composition. Furthermore, standing figures should not be drawn stiffly erect but rather in a variety of postures.

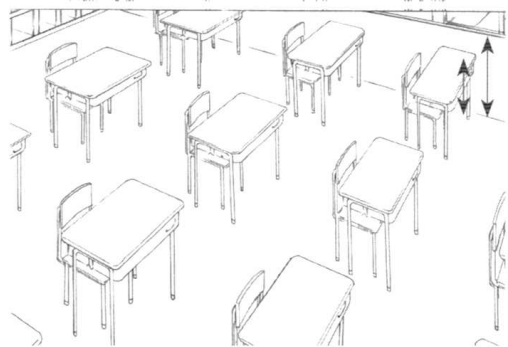
● Classroom from a High Angle



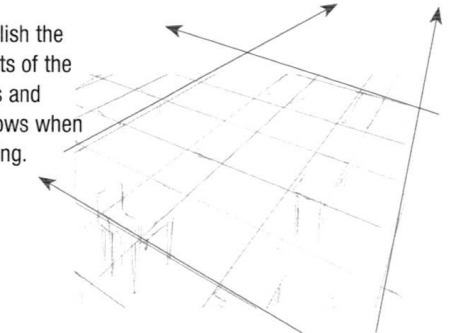
Toward the
Vanishing Point



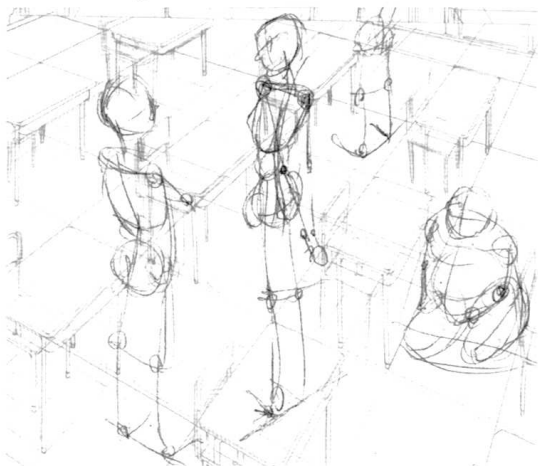
Rough Sketching Establishing the
Positions and Heights of Characters



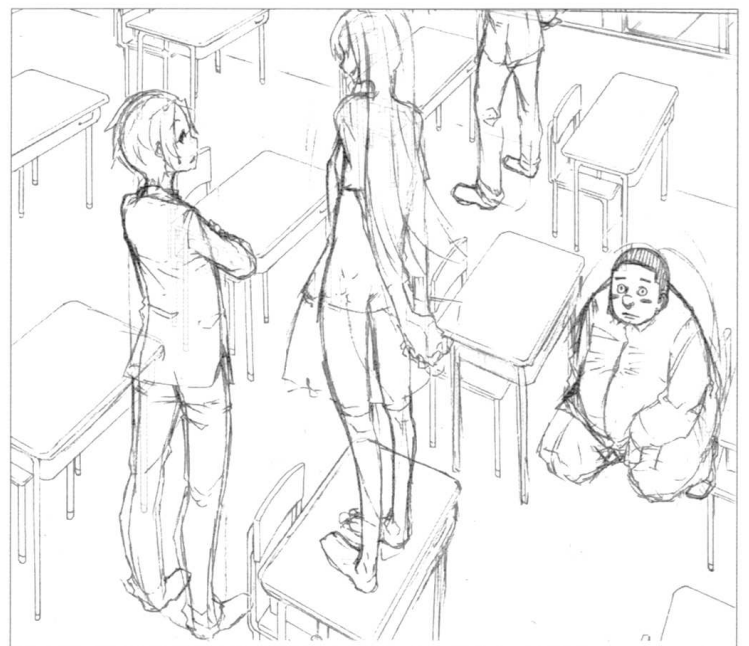
Establish the
heights of the
desks and
windows when
drawing.



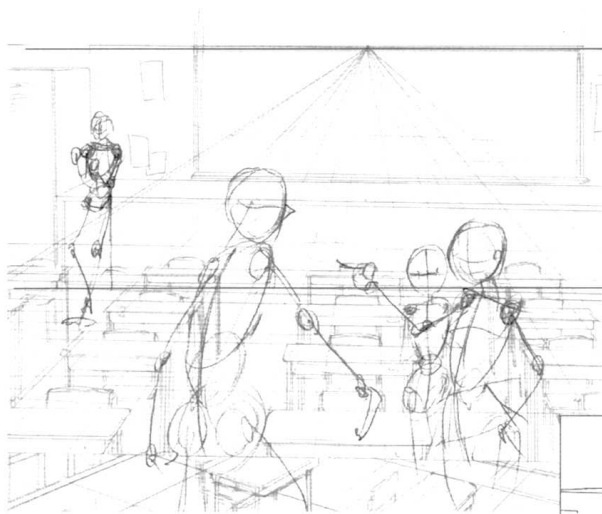
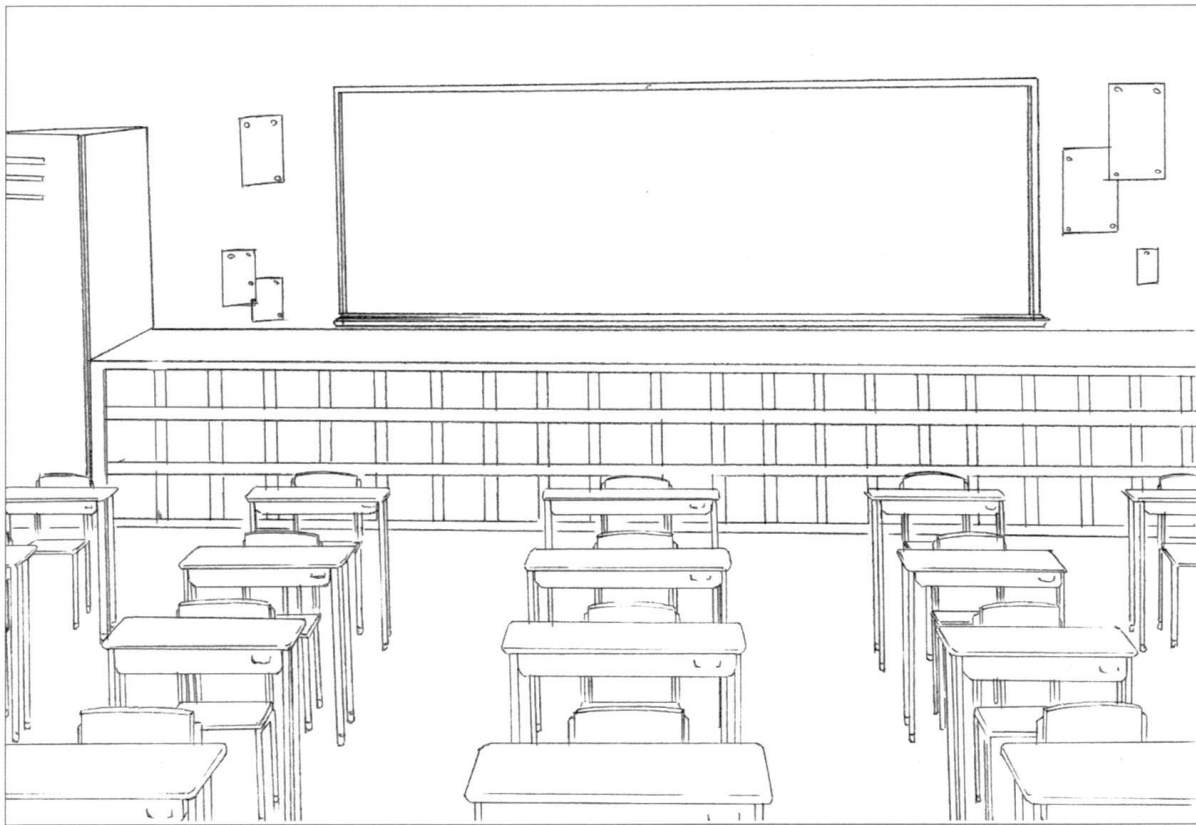
● Positioning Characters: Capturing the Difference in Height between the Desk and the Character Standing Next to the Desk



If you are able to capture differences in heights between characters and objects, then you can apply this to any scene.

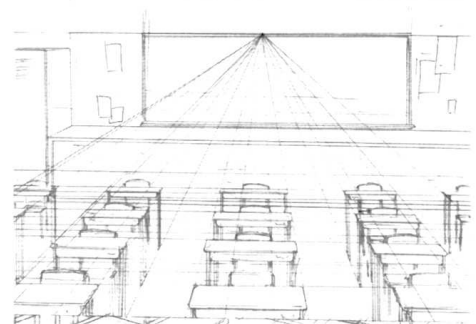


● Looking at the Classroom's Rear

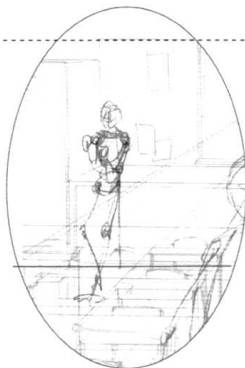


Horizon Line

Floor



One-point perspective lends itself well to expository purposes, when the goal is purely to "show a scene."



This composition begins with the floor line and the standing character.



Desks and Chairs: Impeccable Desks and Chairs

● Profile View Challenge



Rough Sketch

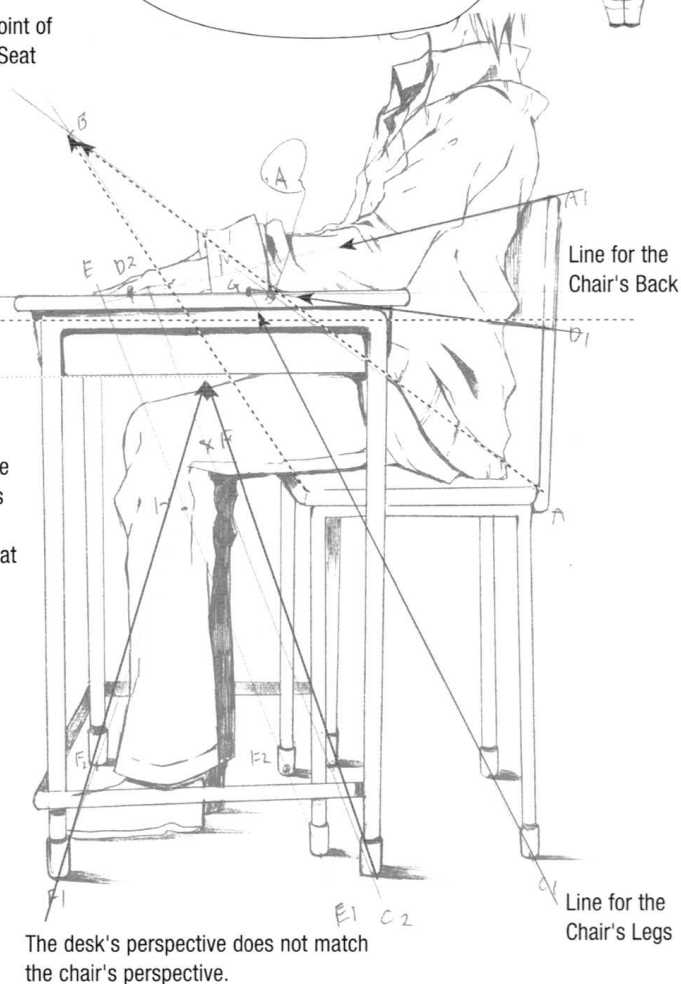
For the above, the artist produced a rough sketch and then added finishing touches while being conscious of depth as is his custom. At first glance, the drawing seems unassailable. However, we notice a problem when we redraw the composition in perspective.



Vanishing Point of the Chair's Seat

Neither the desk's top nor bottom surface is visible, which means that the horizon line is approximately located here.

However, the lines for the desk and the character's feet converge at this point, which suggests that this is the horizon line.



The desk's perspective does not match the chair's perspective.

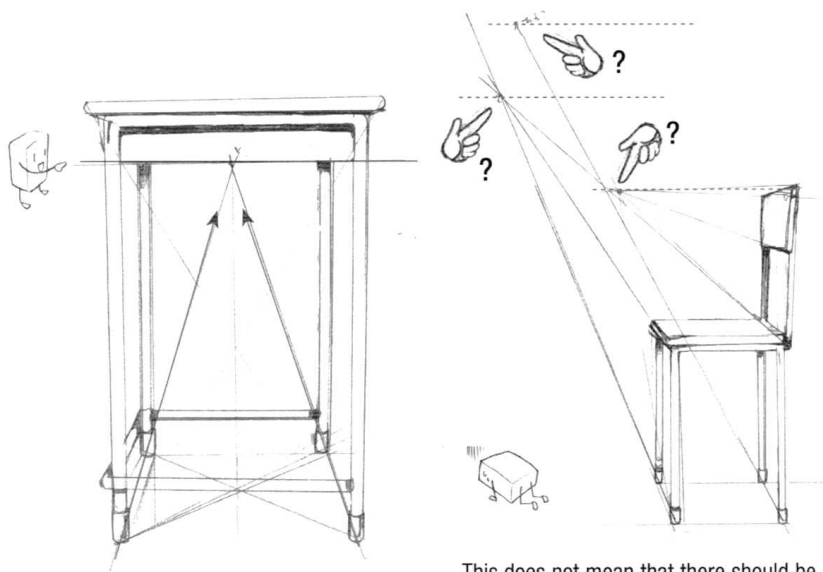
Line for the Chair's Back

Line for the Chair's Legs

In manga, artists primarily draw scenes of characters at desks as close-up panels. However, Artist S challenged us to create a full-figure composition, so this discussion is for his records.

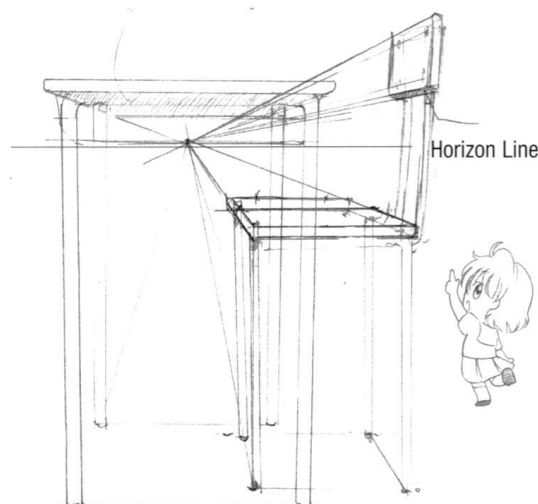


1. Individual Examinations of the Desk and Chair



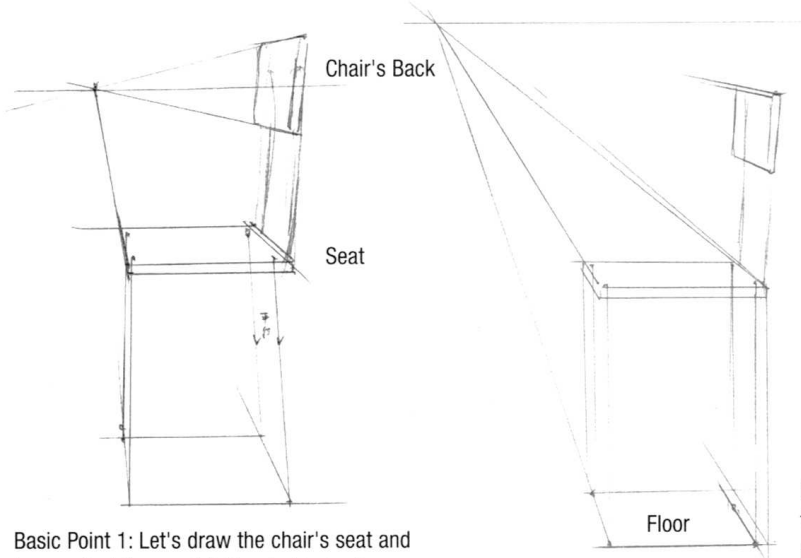
Since the desk's vanishing point is well defined, we know that the horizon line should be here.

This does not mean that there should be multiple horizon lines—one for every vanishing point. For this drawing, we need only one horizon line.



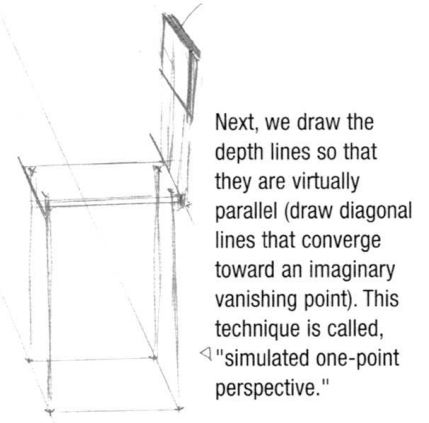
The above shows the chair drawn in a perspective that has the same vanishing point and horizon line as the desk. Now, the chair's back exists in "the world above," which means that the floor should be made visible.

2. Returning to the Basics of Drawing a Chair in Perspective

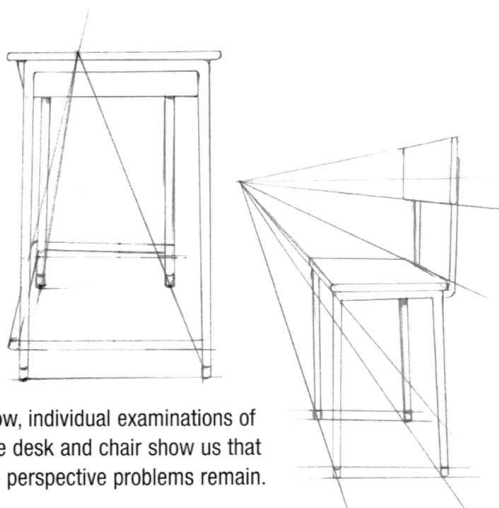
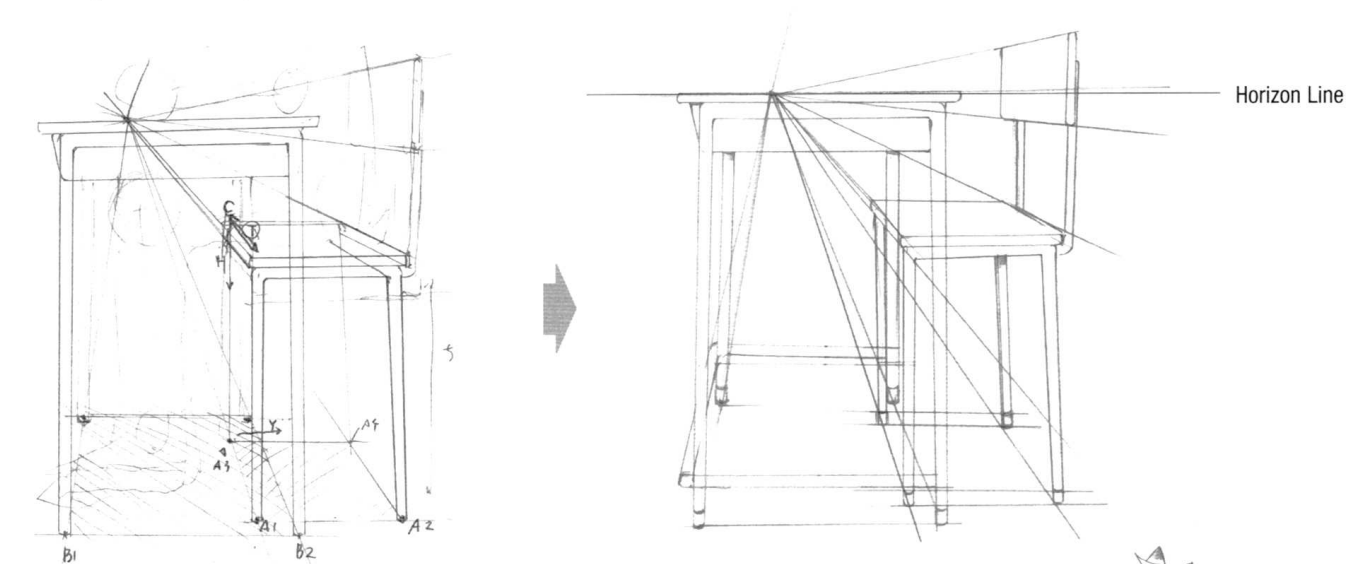


Basic Point 1: Let's draw the chair's seat and legs so that they match the chair's back.

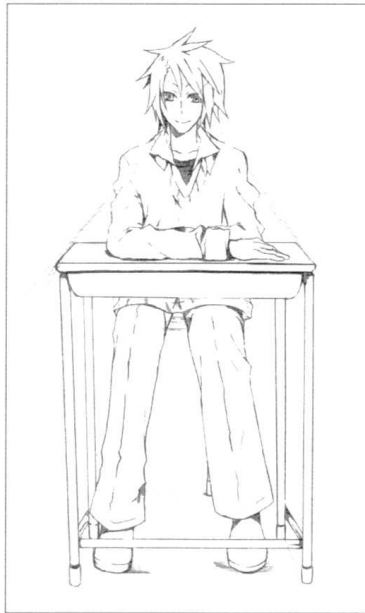
Basic Point 2: Using the sketch of the chair's seat and the floor underneath the chair, let's establish the vanishing point's location and draw the chair's back to match this vanishing point.



3. Revisiting the Challenge: Redrawing the Chair to Match the Desk's Perspective



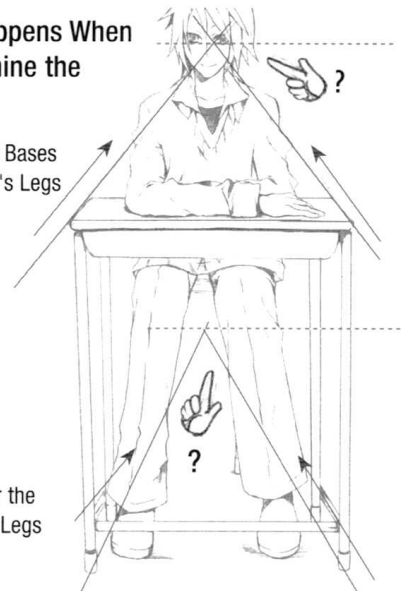
● Front View Challenge



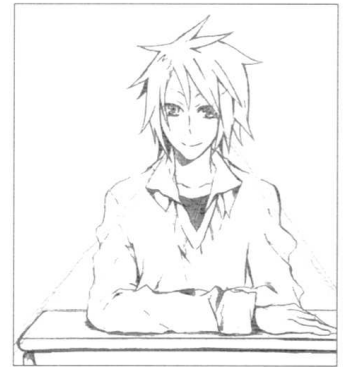
1. What Happens When We Examine the Sketch?

Line for the Bases of the Desk's Legs

Line for the Desk's Legs



Once again, there are two vanishing points.



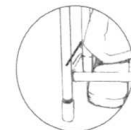
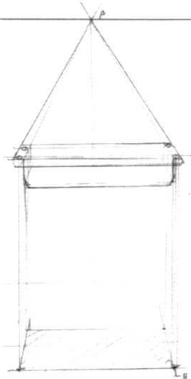
But, this would look great as a close-up!!



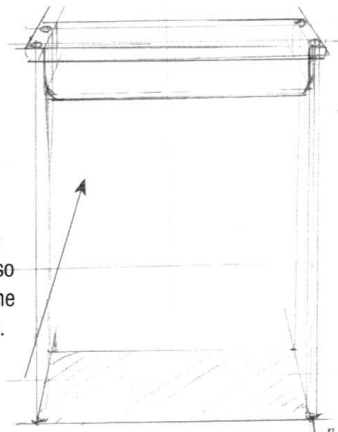
2. Solution: Whether to Use the Desk's Top or the Area of Floor Underneath to Establish the Perspective

A. Using the Desk's Top: Making the Upper Body the Composition's Focus

Horizon Line



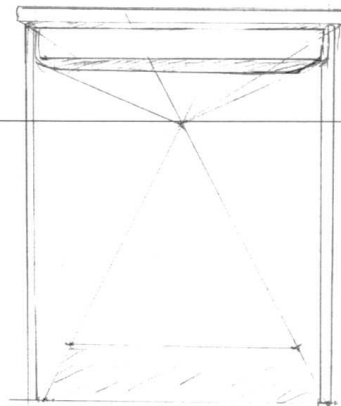
The iron leg supports underneath the desk should also move toward the vanishing point.



Let's draw the horizon line above the desk. The shape of the shadow underneath the desk will change as a result.

B. Using the Floor Underneath the Desk: Making the Lower Body the Composition's Focus

Horizon Line

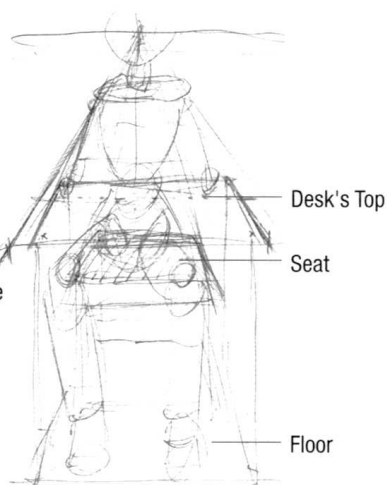


In this case, the desk's underside will come into view.

3. Redrawing the Desk, Using the Desk's Top to Establish Perspective

If you intend to show off a character, then the face has more appeal than the legs. Here, we reposition the character's face along the horizon line and revisit the challenge.

The composition seems to be the character, or rather, the character and the desk's top surface, which are fused into one. However, we also sketch the chair's seat and the floor underneath the chair, which will be obscured in the final composition. It is important to be aware of all three portions of the composition: the top third, the middle third, and the bottom third.



An inspection reveals no problems in the perspective.



The above shows the final composition. We met our challenge successfully.

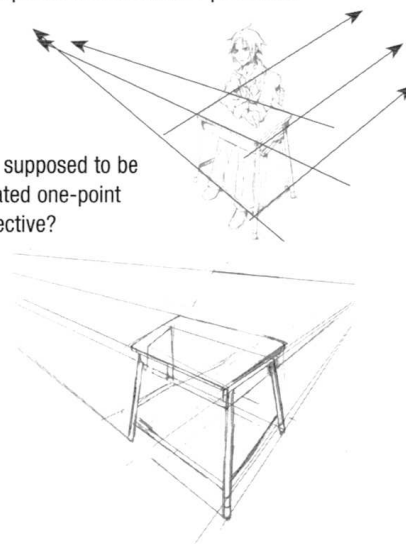


● High Angle, 3/4 View Challenge



An inspection reviews a few problems.

Is this supposed to be simulated one-point perspective?



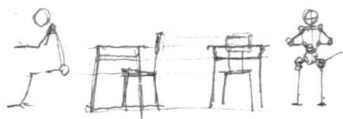
Solution: Having a Horizontal Horizon Line and Moving the Two Vanishing Points Farther Apart

Returning to the Basics

Adjusting the Spatial Relationship between the Character and Surrounding Objects



First, let's produce a study sketch, roughly sketching the character's pose.



These thumbnail sketches illustrate the relationship between the character and the desk. Unless you are extremely unaccustomed to sketching, you should draw thumbnail sketches like these regularly while you compose a drawing.

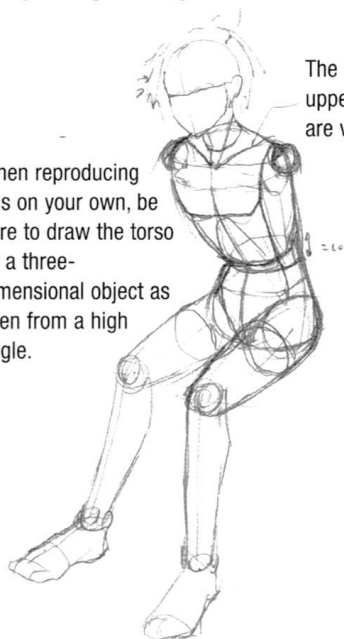
Establishing the Character's Posture



We establish the angle of the character sitting at his desk. A slight shift in the face's direction changes the impression that the image projects.

Capturing the Figure

When reproducing this on your own, be sure to draw the torso as a three-dimensional object as seen from a high angle.



The body's upper surfaces are visible.

Sketch lines connecting the figure's joints.



Desk's Top

65 x 45 cm
(Approx. 25 5/8" x 17 11/16")

Seat

39.5 x 40 cm
(Approx. 15 5/8" x 15 11/16")

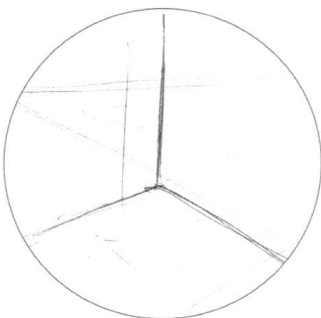
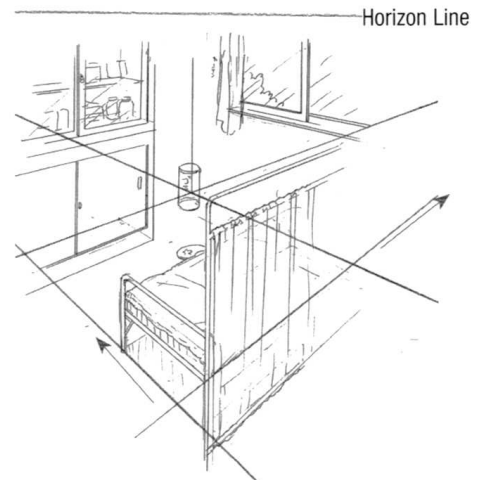
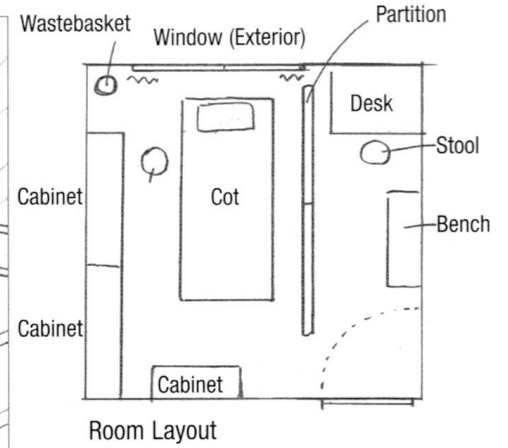
Lines Connecting the Joints

- These lines indicate areas of torsion in the body.
- Making the edges of the desk and the chair parallel to the lines connecting the joints enables you to sketch the figure as if seated directly facing the desk and sitting straight in the chair.
- Drawing the lines connecting the joints in perspective helps to heighten the sense of perspective.

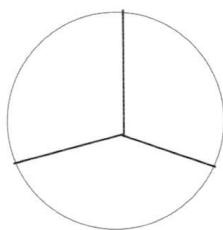


The partition, cot, medicine cabinet, and window with a curtain are all obligatory props.

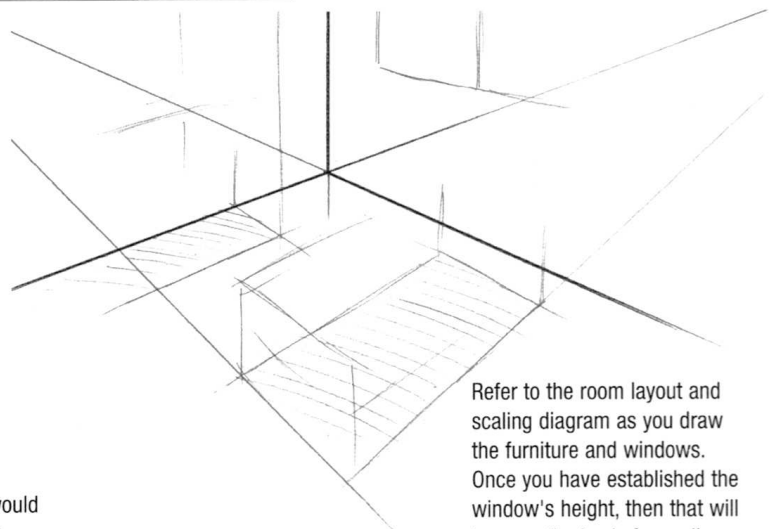
● High-Angle View of the Nurse's Office Seen from the Door



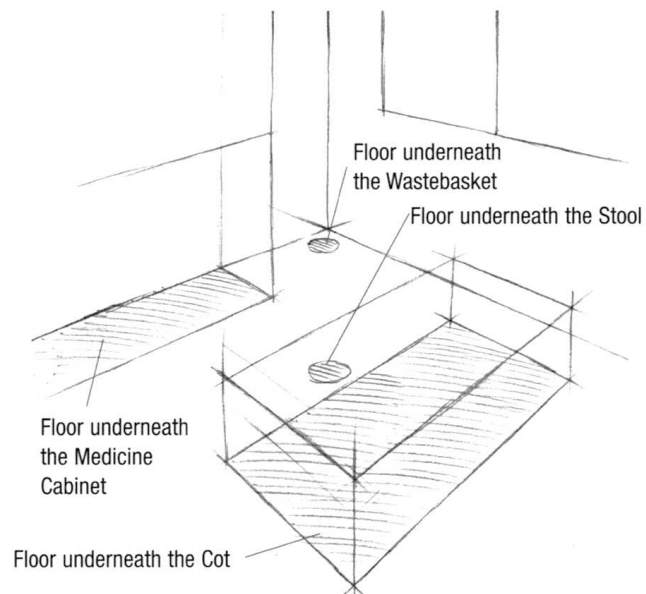
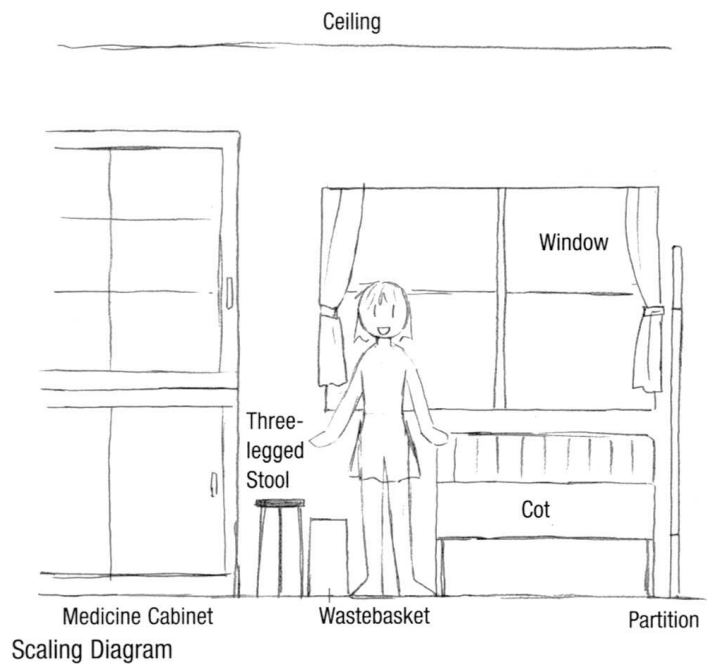
The above three lines establish the space as a room. These alone create the illusion of a space. The horizon line for the room corner shown above is positioned high in the composition.



This shows how the corner would appear if the horizon line was positioned low in the composition.

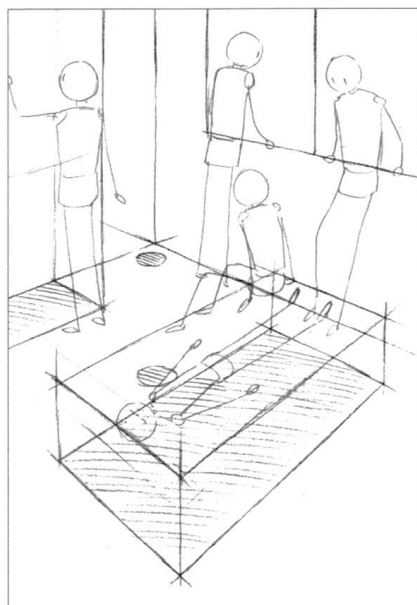


Refer to the room layout and scaling diagram as you draw the furniture and windows. Once you have established the window's height, then that will become the basis for scaling the remainder of the room.

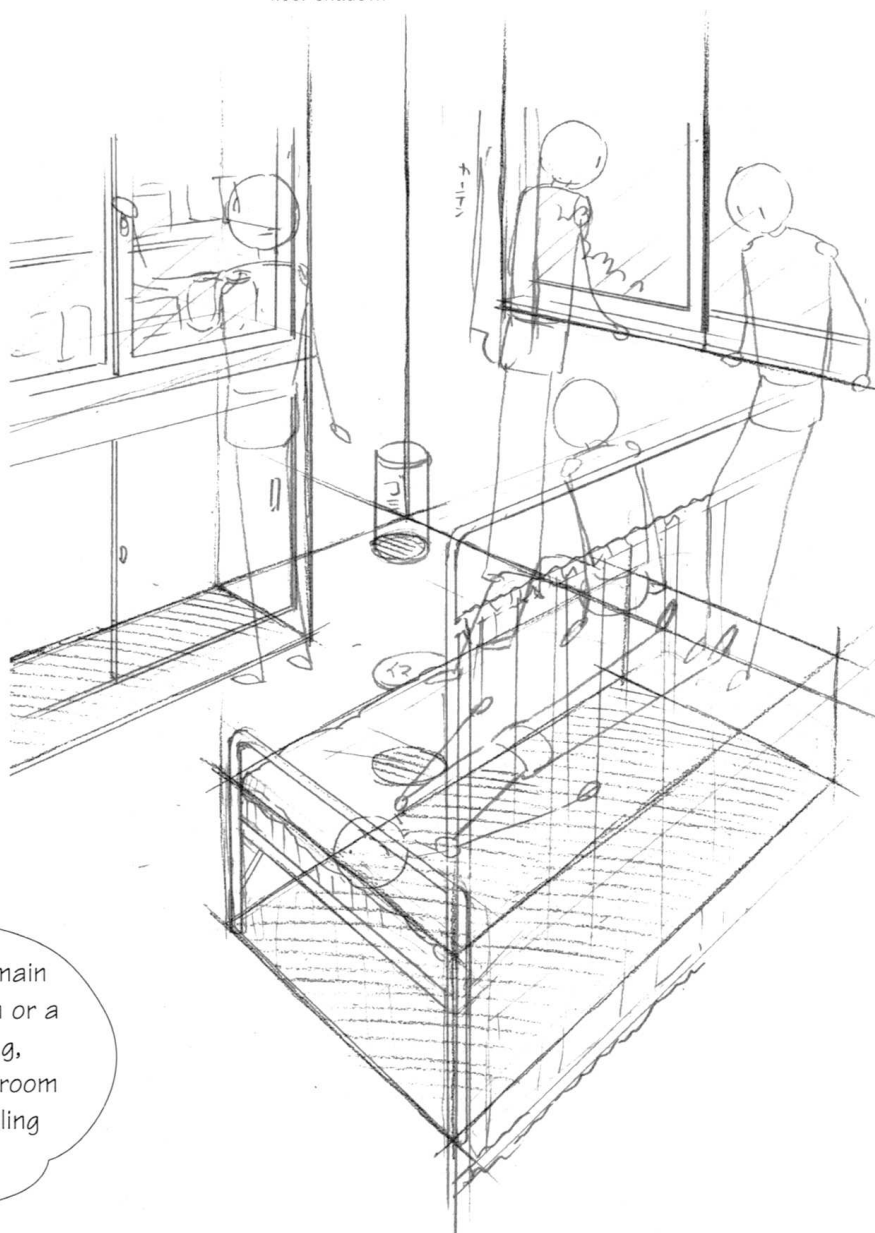


Establish the shapes of the undersides of the cot and medicine cabinet, gain an idea of the floor's appearance, and establish the heights of objects. Sketch the position of any other object to add as a floor shadow.

● Positioning Characters

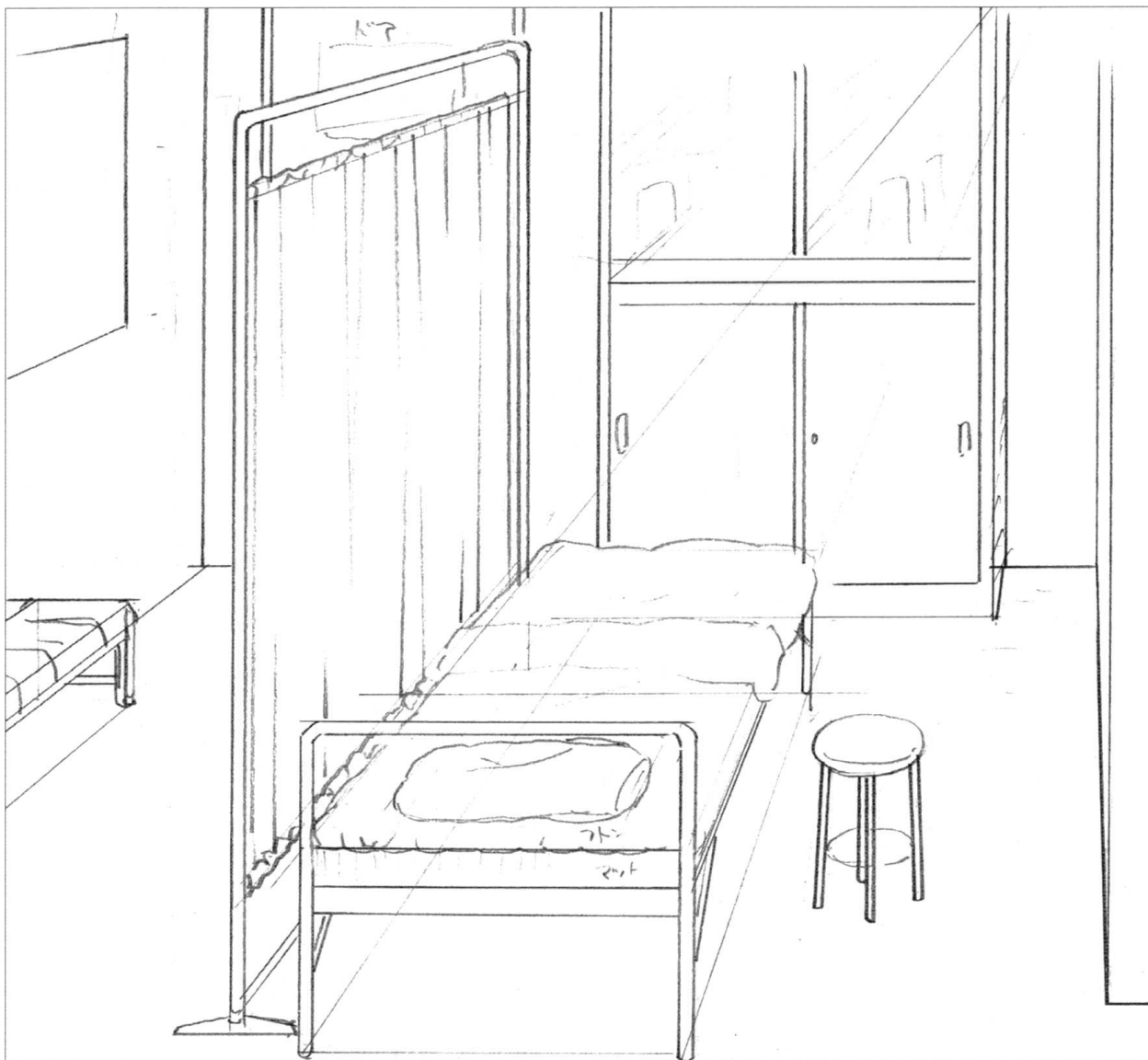


Sketch the characters to match the scale of the furniture and window. If you use the window's height as a basis for scaling all other objects, then any figure you draw according to the window's height or figures located next to another piece of furniture should appear natural.

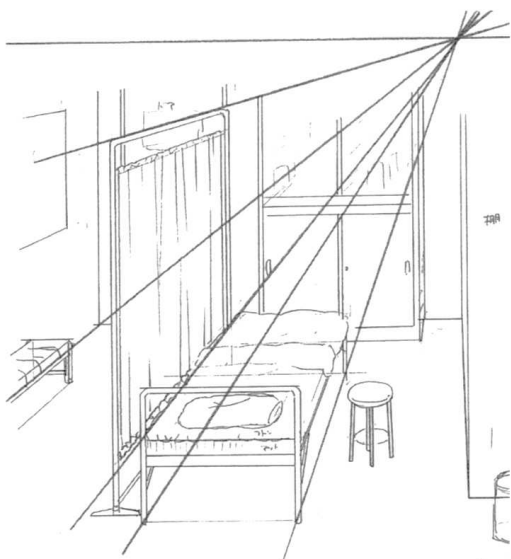


When drawing a main character's room or a room as a setting, always sketch a room layout and a scaling diagram as well.

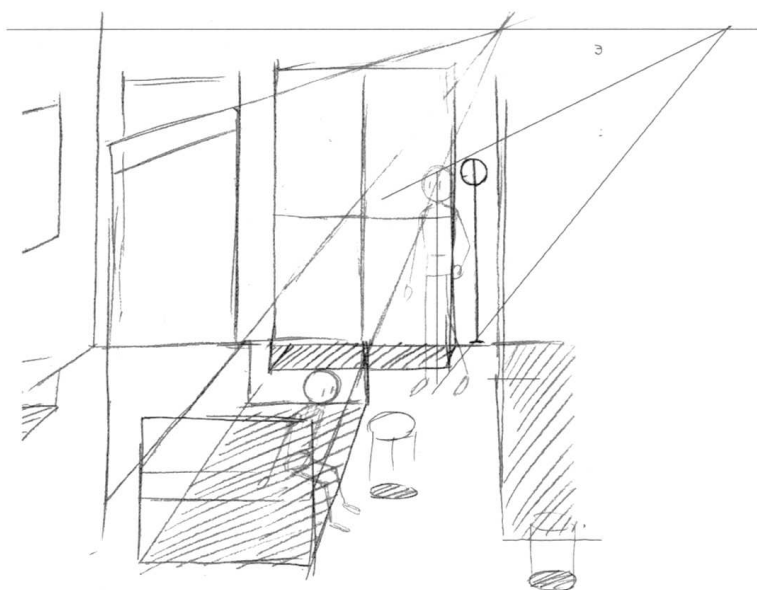
● Nurse's Office Seen from the Window



● Positioning Characters: Transferring Mock-up Figures

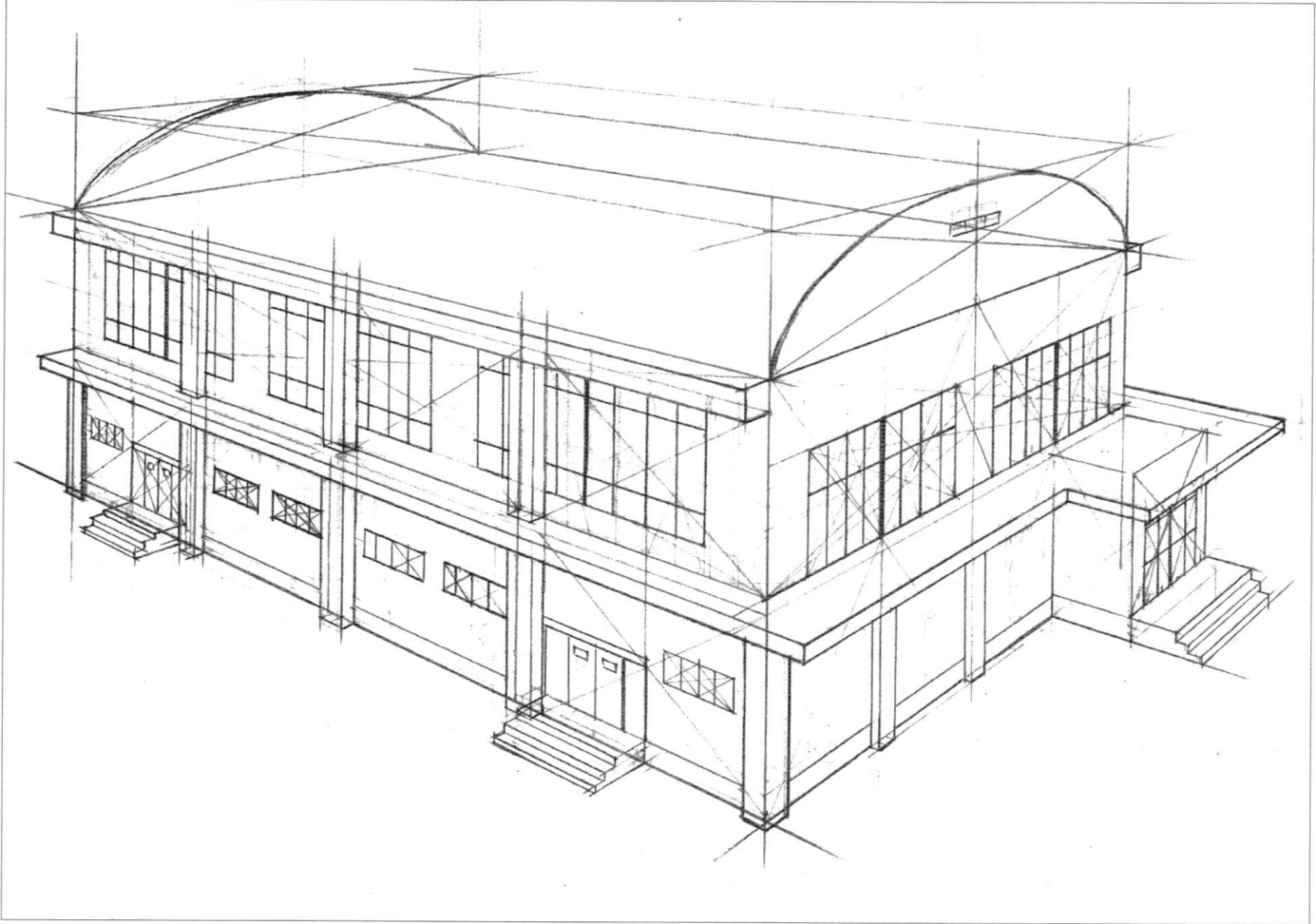


This room gives us the impression of peeking in from the outside. The nurse's office tends to be small, so use one-point perspective instead of two-point perspective, which would emphasize a sense of expansiveness.

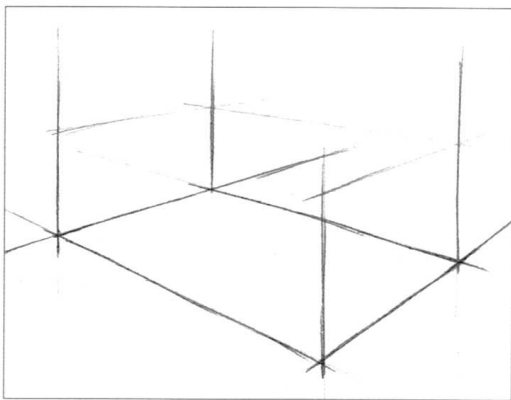


Position a mock-up figure against the wall to draw the medicine cabinets and other items.

Exterior View



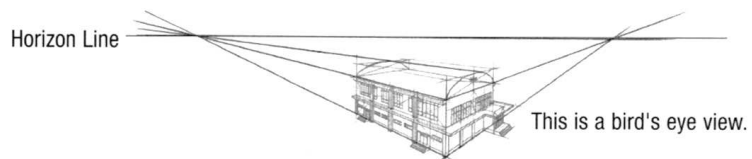
Begin by Drawing a Box



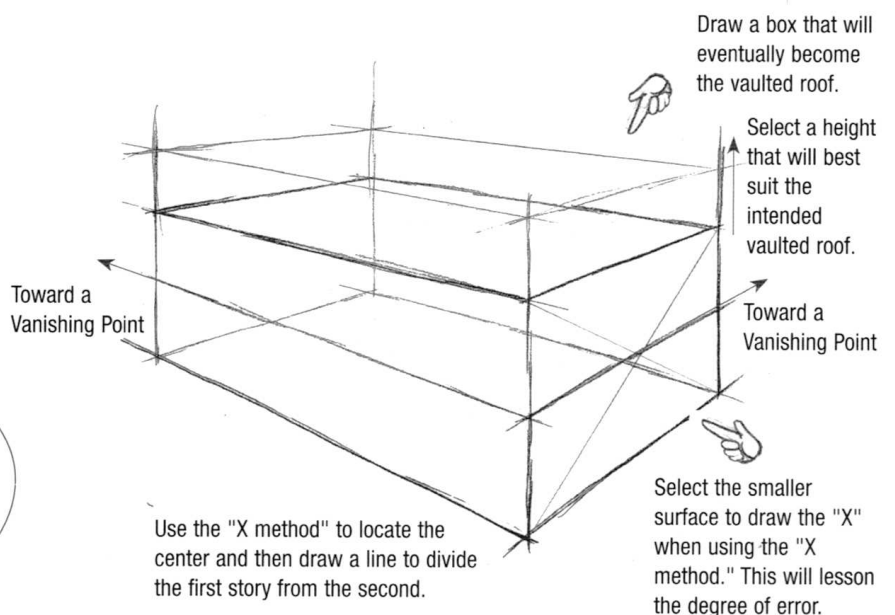
Sketch a box in two-point perspective.



It might look complicated, but really you can reproduce this gymnasium using only boxes and the "X method."

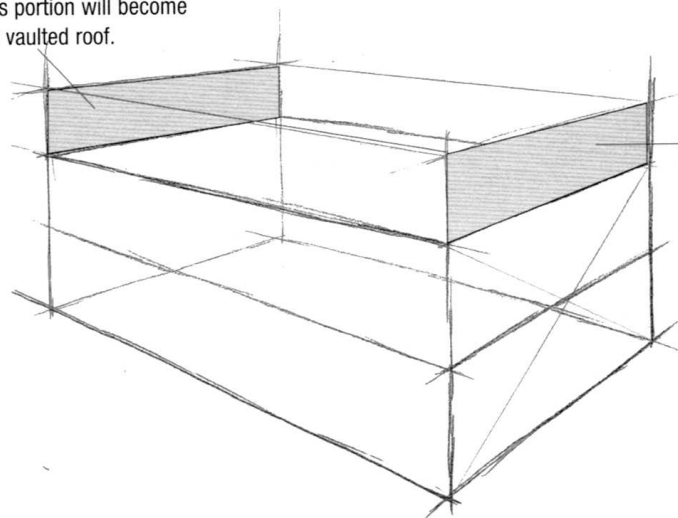


This is a bird's eye view.

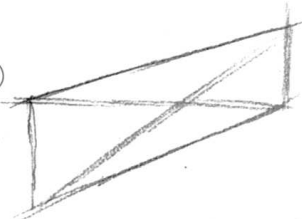


Drawing the Vaulted Roof

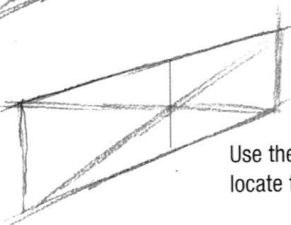
This portion will become the vaulted roof.



①

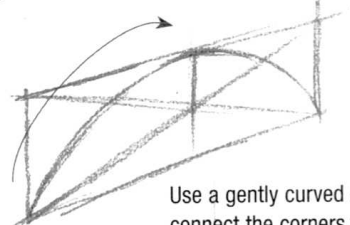


②

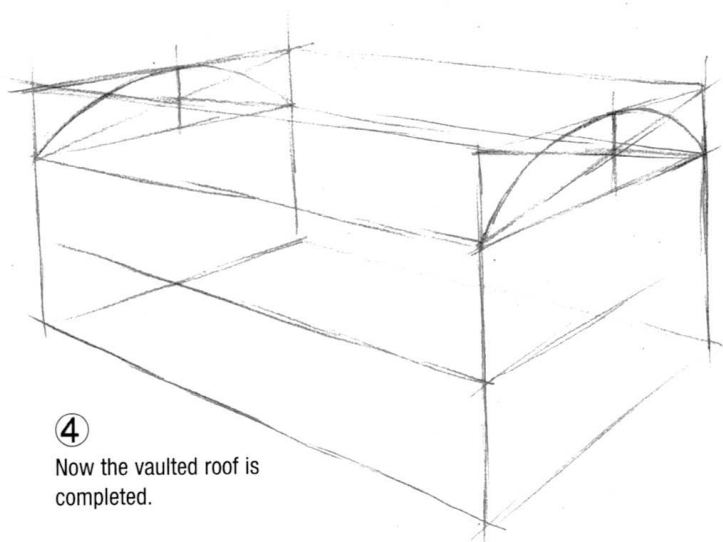


Use the "X method" to locate the center.

③

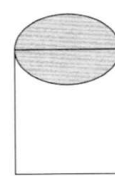
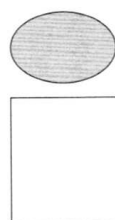
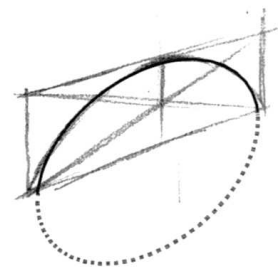


Use a gently curved arc to connect the corners and the center.



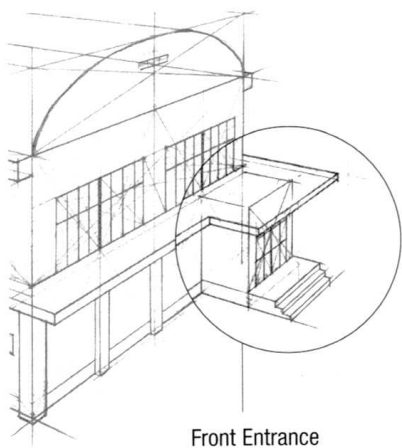
④

Now the vaulted roof is completed.

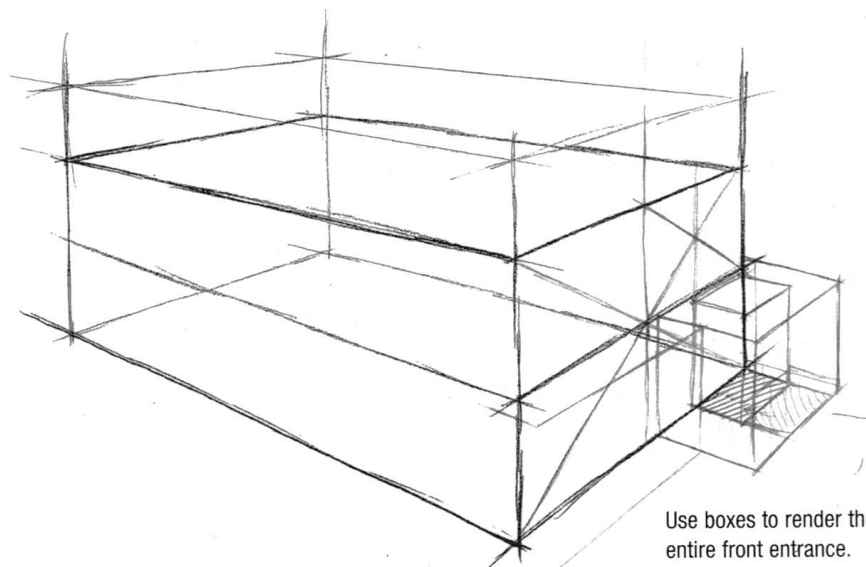


The vaulted roof is actually a fusion of an ellipse and a rectangle.

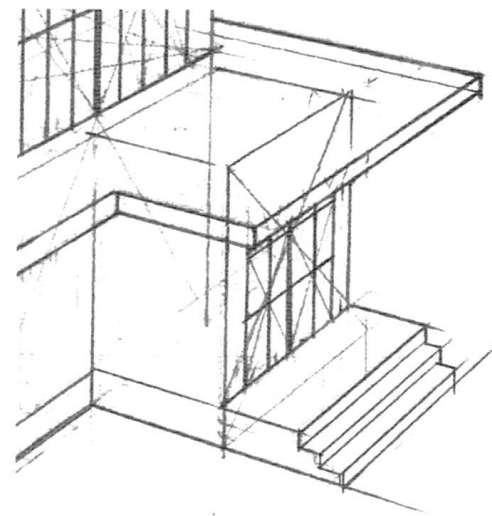
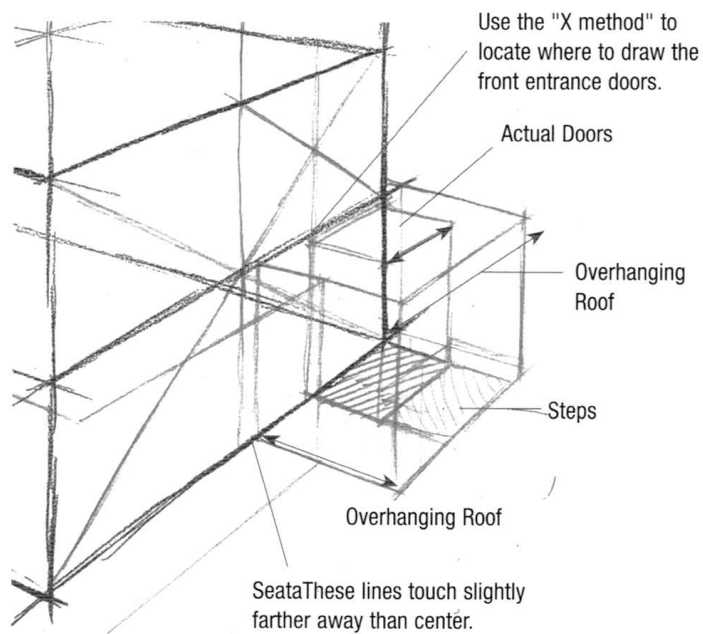
Drawing the Front Entrance



Front Entrance

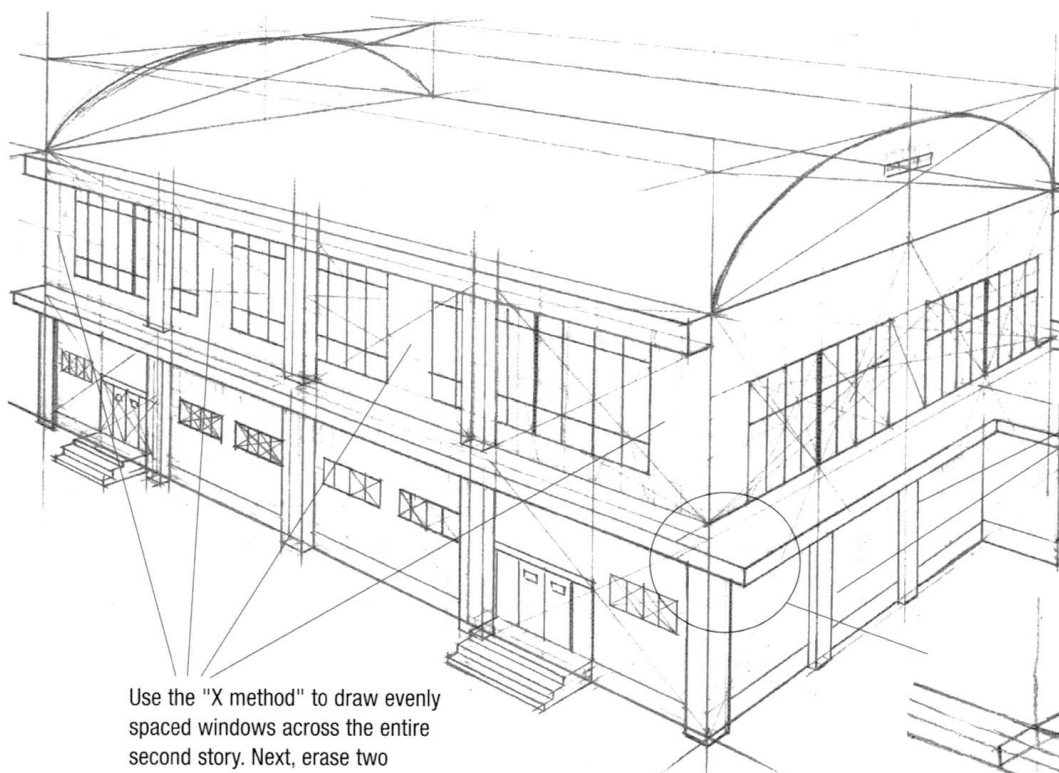


Use boxes to render the entire front entrance.



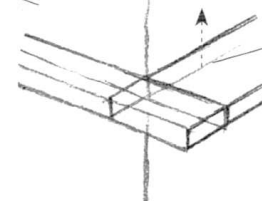
Completed Front Entrance

Overhanging Second Story Roof and Windows

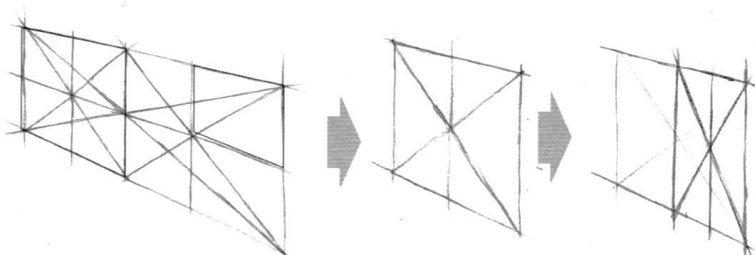


Use the "X method" to draw evenly spaced windows across the entire second story. Next, erase two windows at a time to create areas of blank wall.

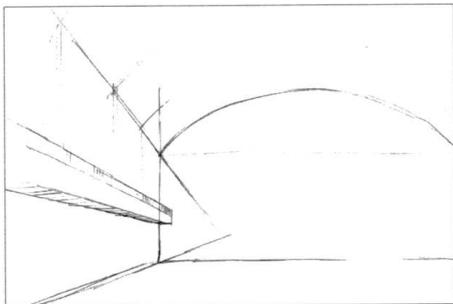
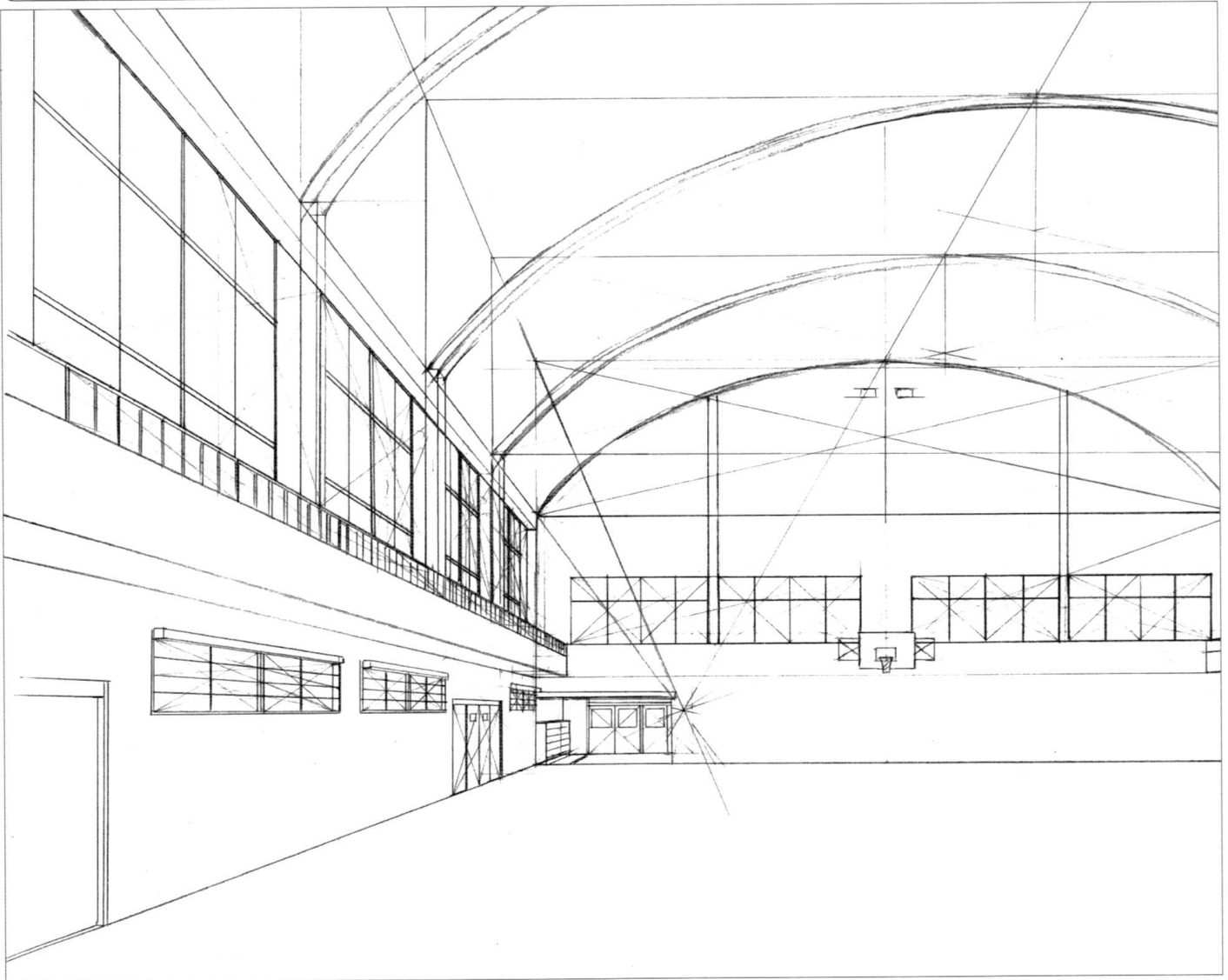
Use the "X method" to locate where to position the projecting masonry supports as well.



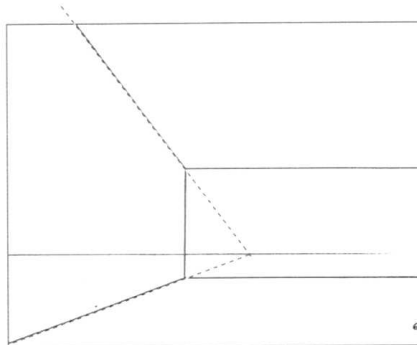
This is a line that was initially drawn to divide the first story from the second. The artist established the ledge's height and added volume.



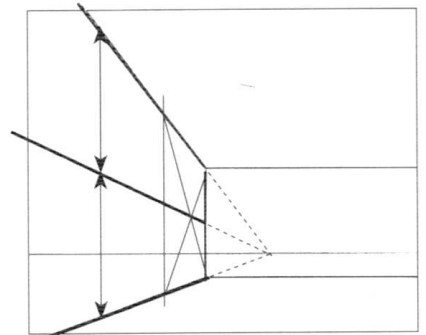
Repeat the "X method" several times to draw all of the windows.



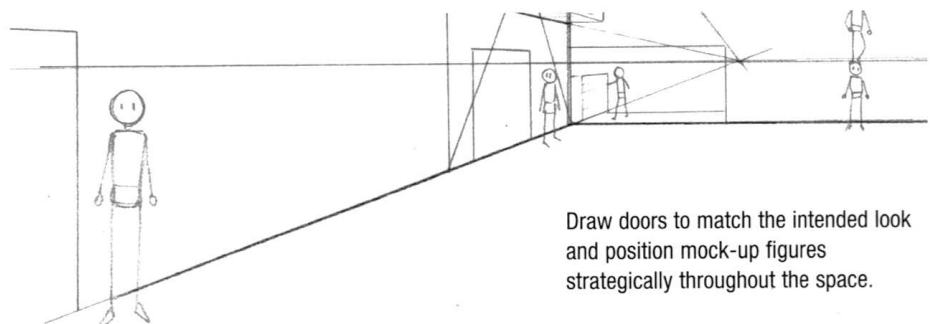
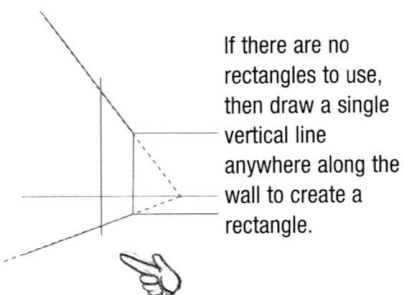
① Produce a rough sketch.

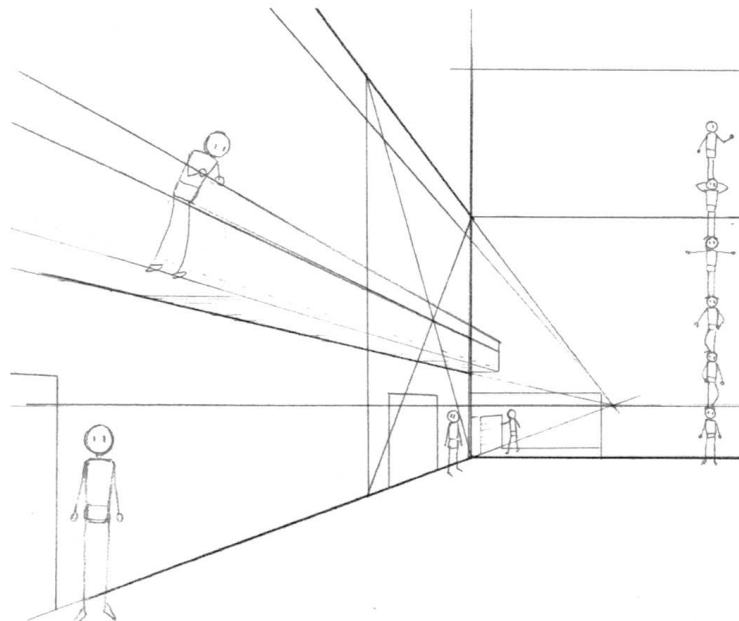
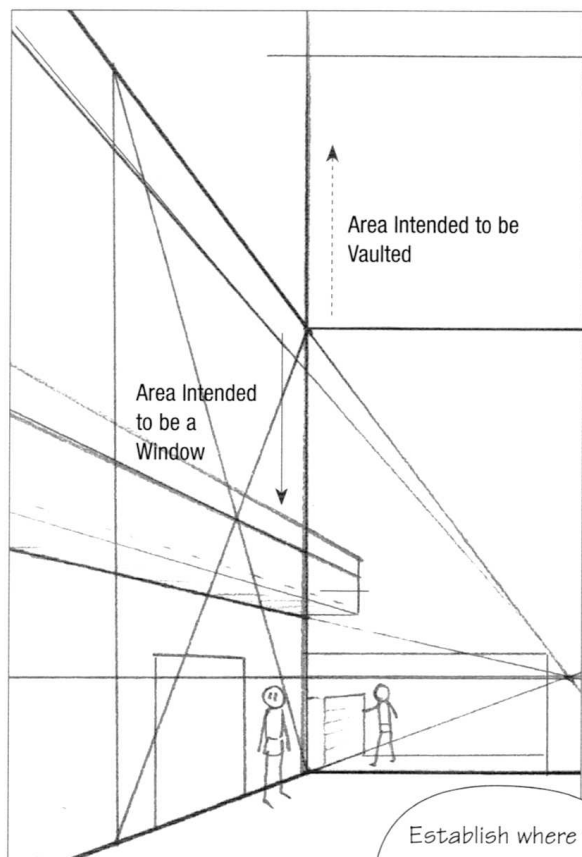


② Establish where to position the horizon line and the vanishing point to create the interior space.

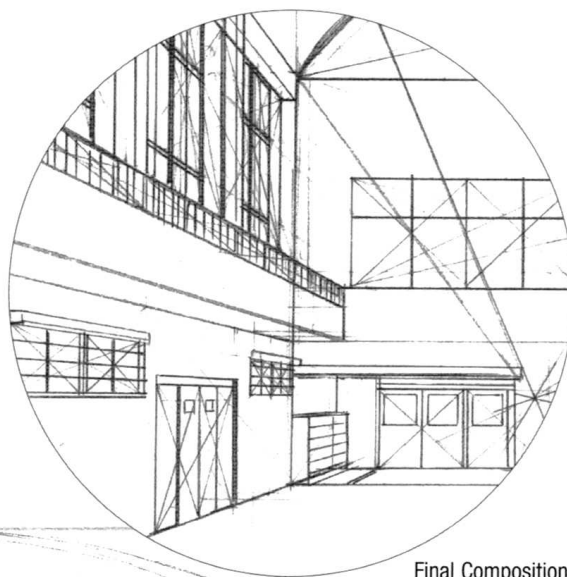


③ Use the "X method" to locate the center and draw a line to divide the first story from the second.

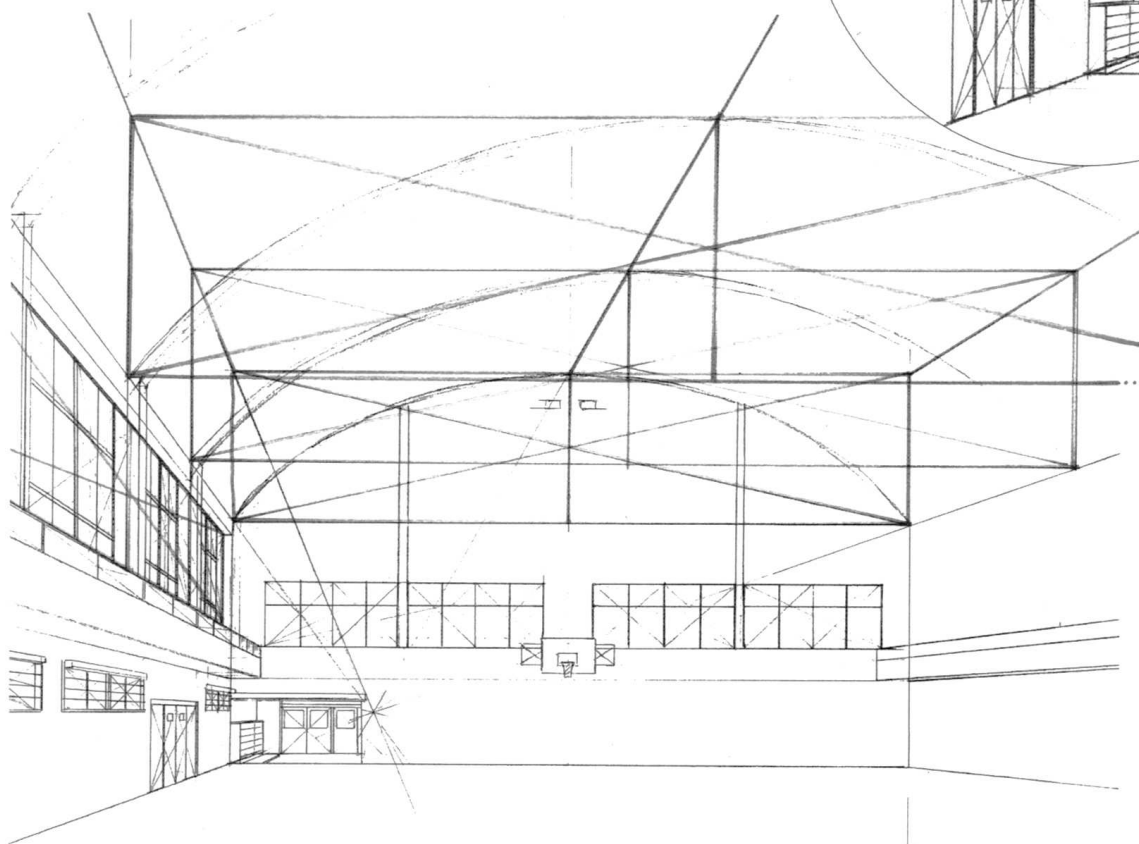




To create the vaulted roof's curved arches, draw a rectangle and use the same guidelines as when drawing a vaulted roof.



Final Composition

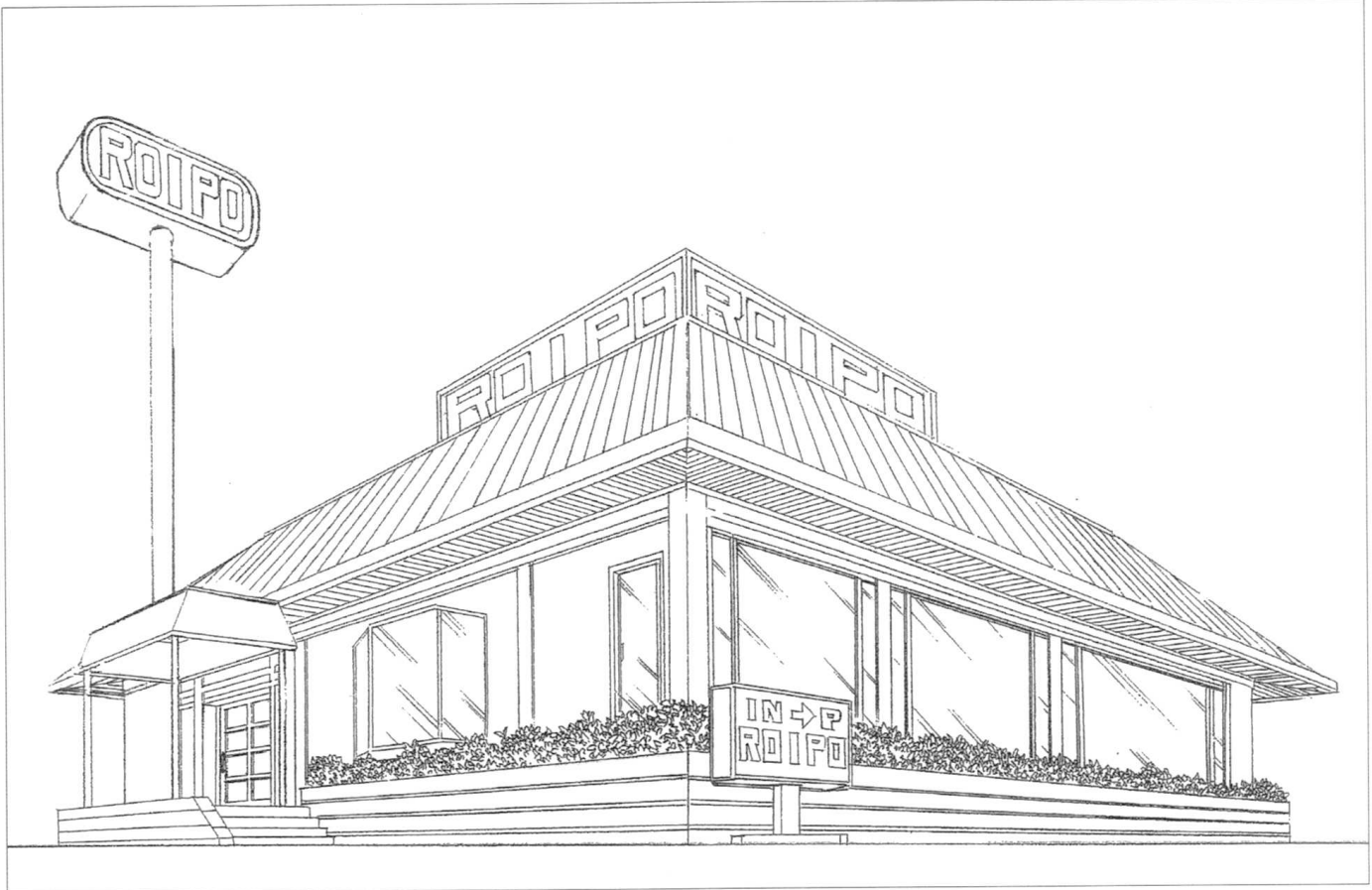


Drawing Familiar Establishments

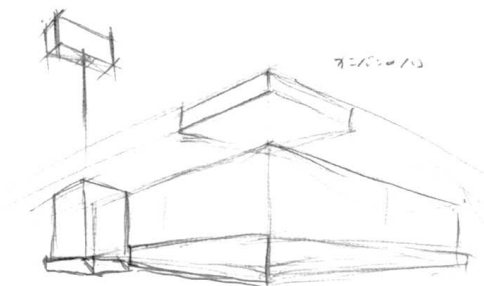
This section covers how to draw the exteriors and interiors of family restaurants, fast food restaurants and other such establishments.

Family Restaurants

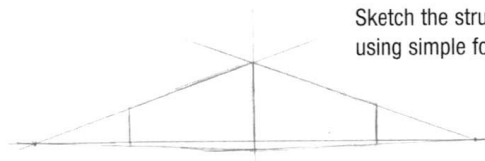
The large windows and signage constitute this type of restaurant's distinguishing features.



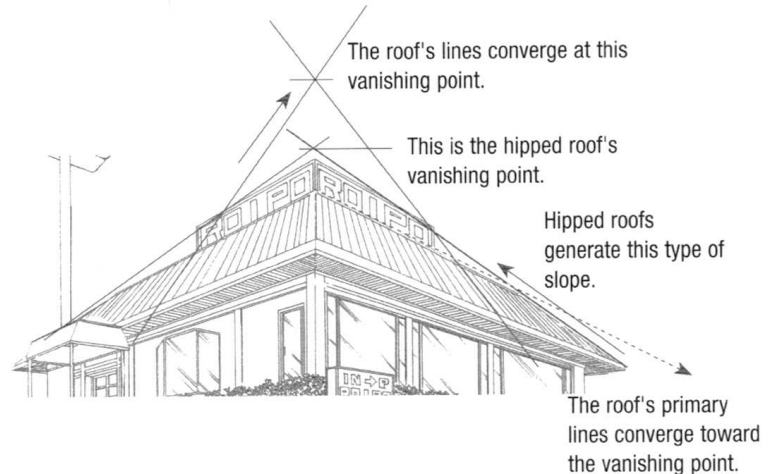
Drawing the Exterior View



The above shows a rough sketch. Take extra care at this stage with creating a sense of expansiveness, maintaining awareness of perspective (i.e. where the vanishing points and horizon line are located).



Sketch the structure's entire silhouette using simple forms.

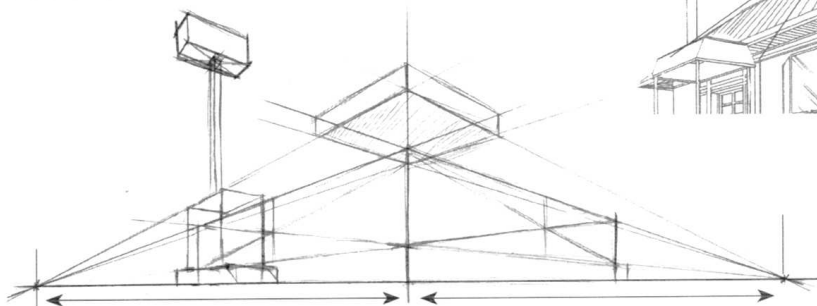


The roof's lines converge at this vanishing point.

This is the hipped roof's vanishing point.

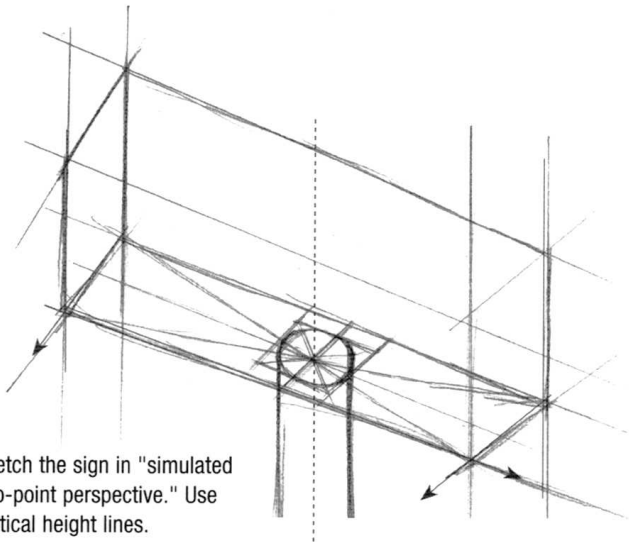
Hipped roofs generate this type of slope.

The roof's primary lines converge toward the vanishing point.

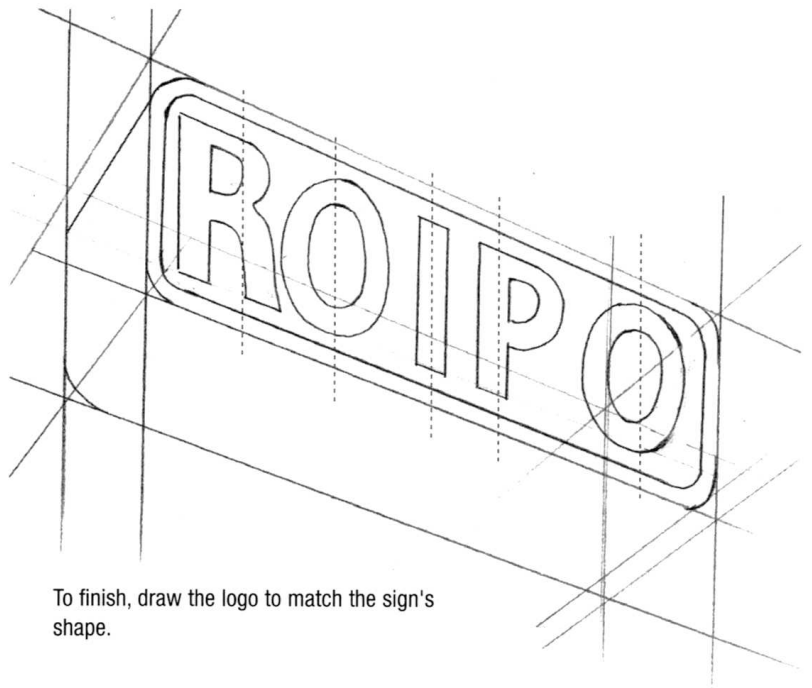
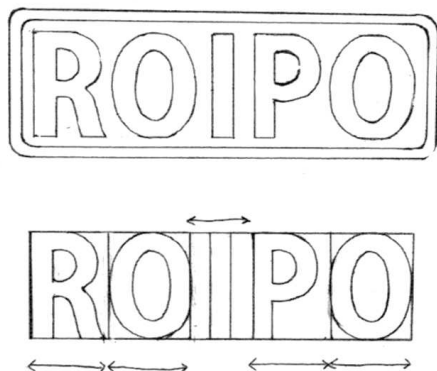
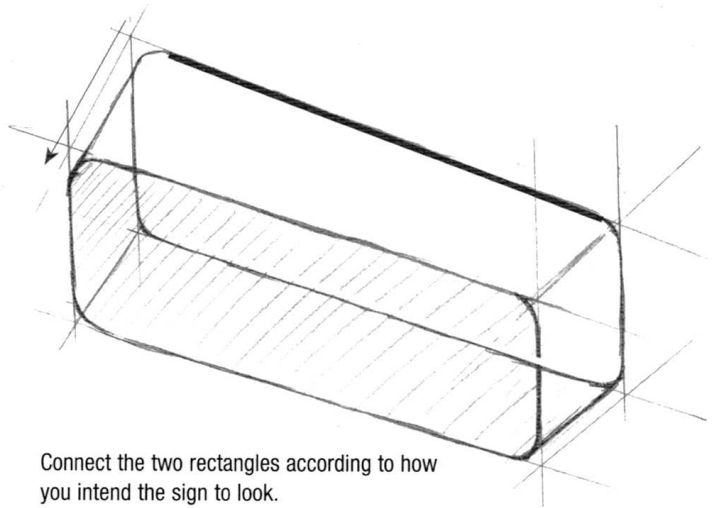
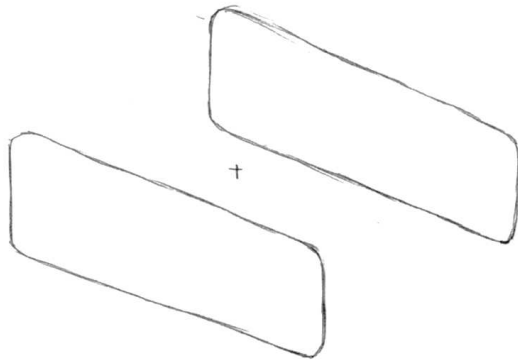
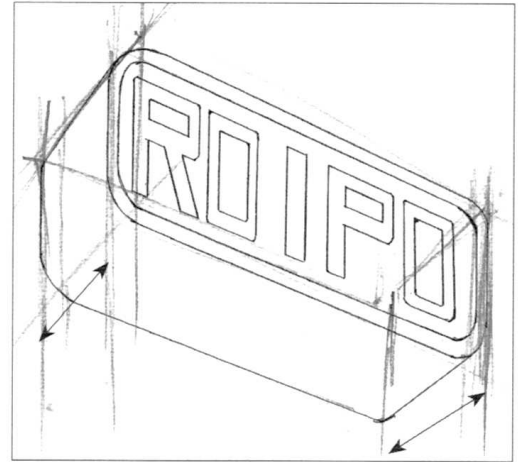


Making the right and left sides expand equally projects a bold, stately impression.

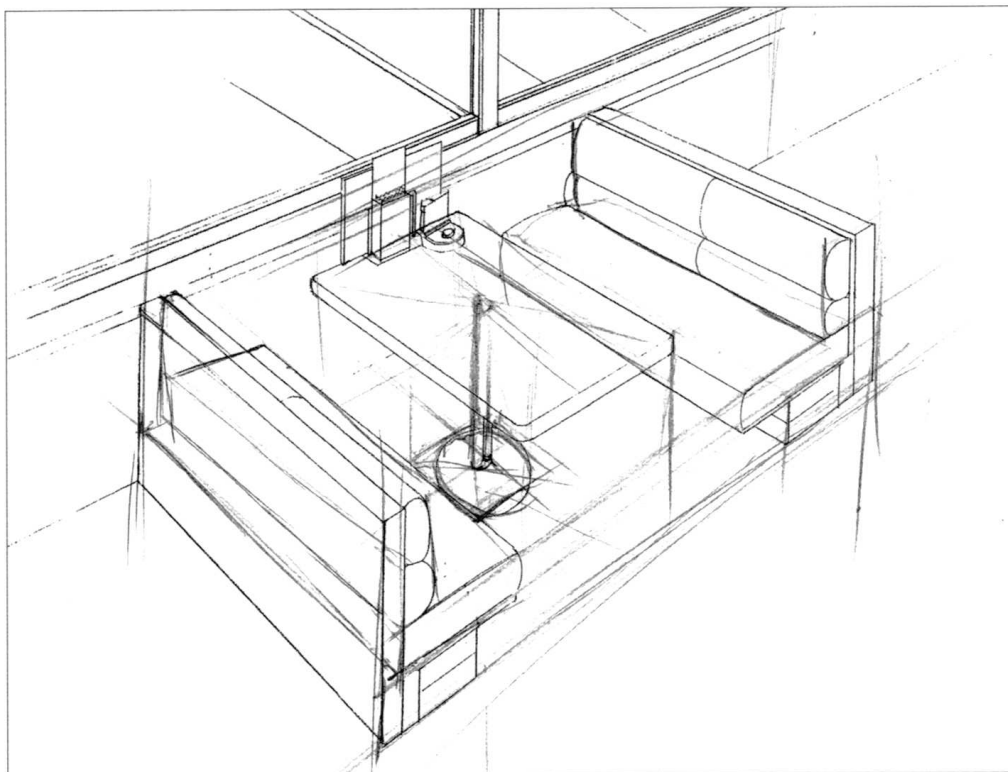
Drawing Signs



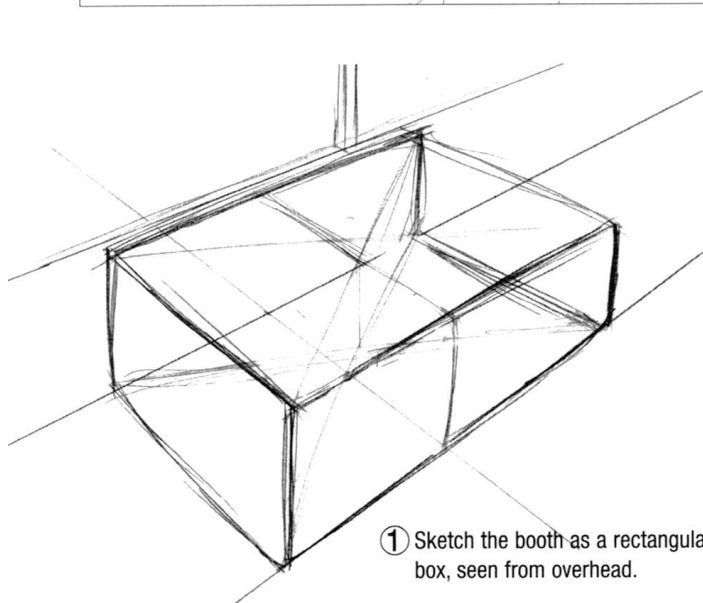
Incorrect



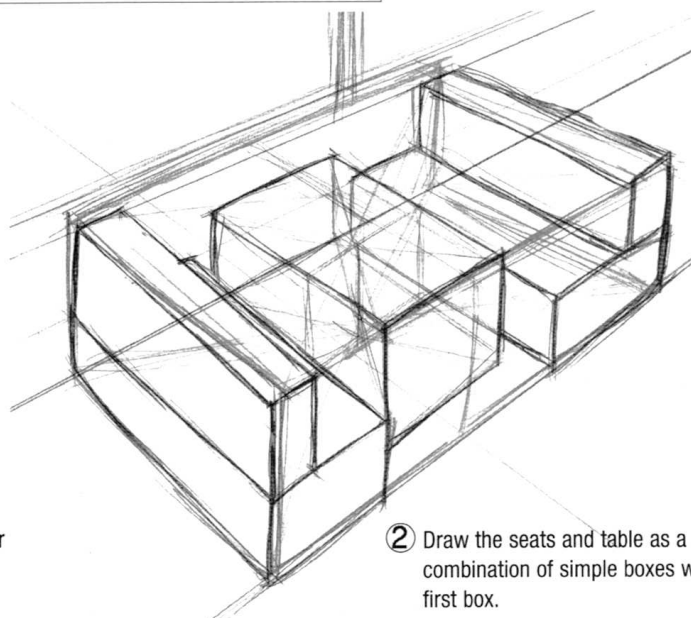
Drawing Booths I: High Angle



Rather than attempting to draw the seats and the table separately, compose them as a "box" and draw them as a single unit.

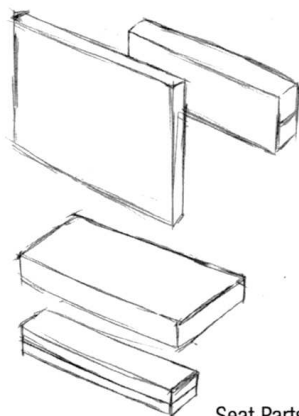
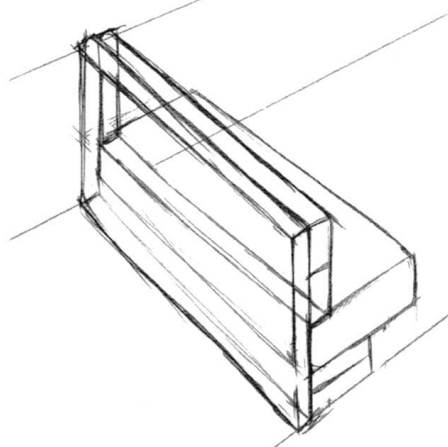


① Sketch the booth as a rectangular box, seen from overhead.

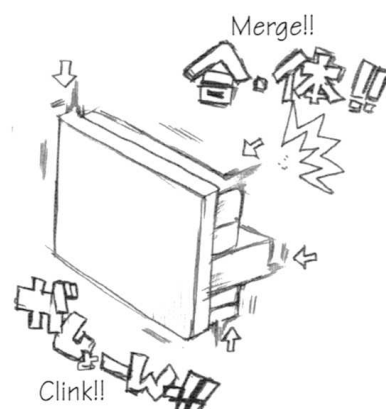


② Draw the seats and table as a combination of simple boxes within the first box.

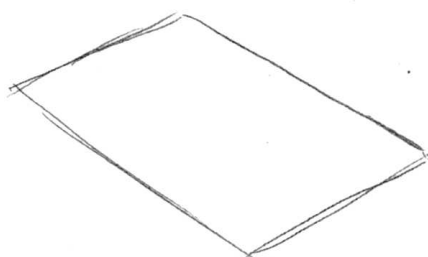
Rendering the Seat as a Cluster of Wooden Boards



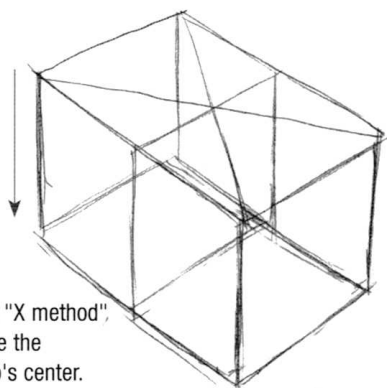
Seat Parts



Using the "X Method" to Draw the Table

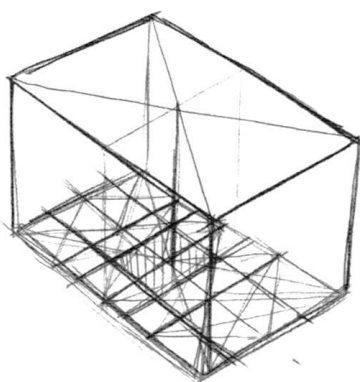


① Roughly sketch the tabletop in perspective.

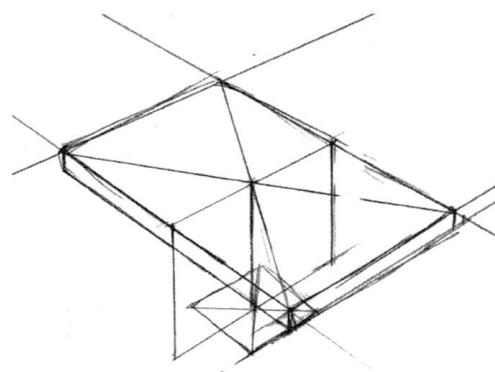


Use the "X method", to locate the tabletop's center.

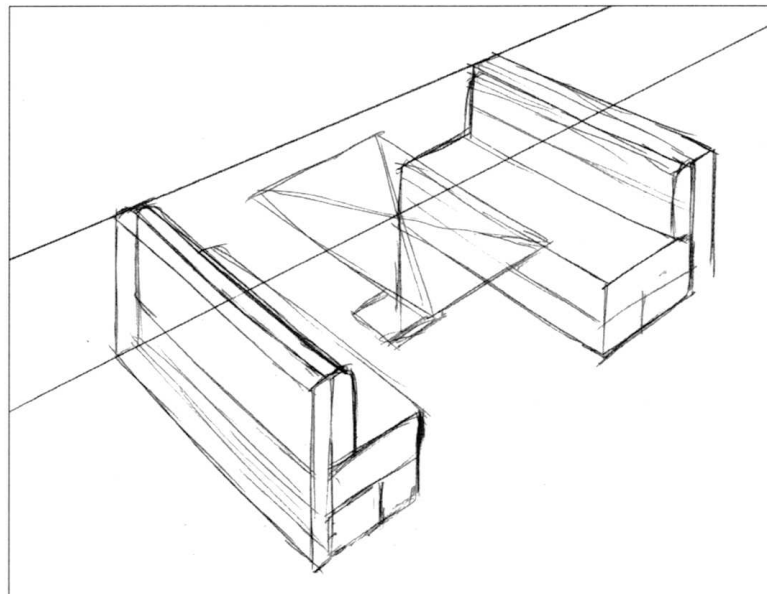
② Think about how high to make the table and draw it as a box.



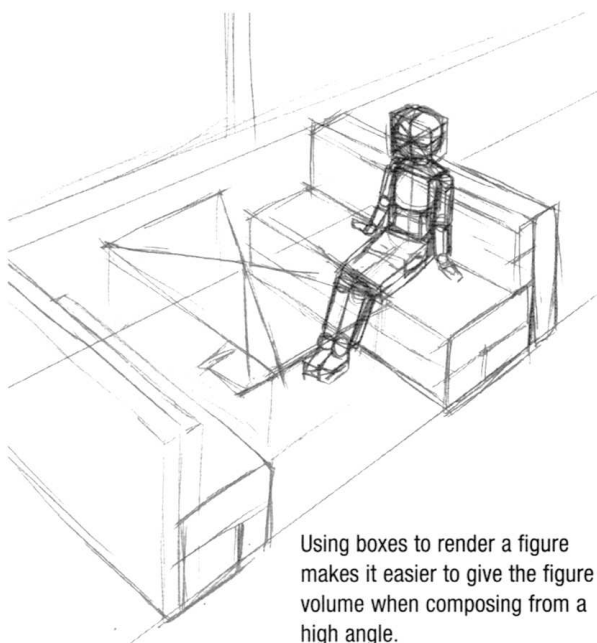
③ Divide up the floor underneath the table and sketch the bases of the table's legs.



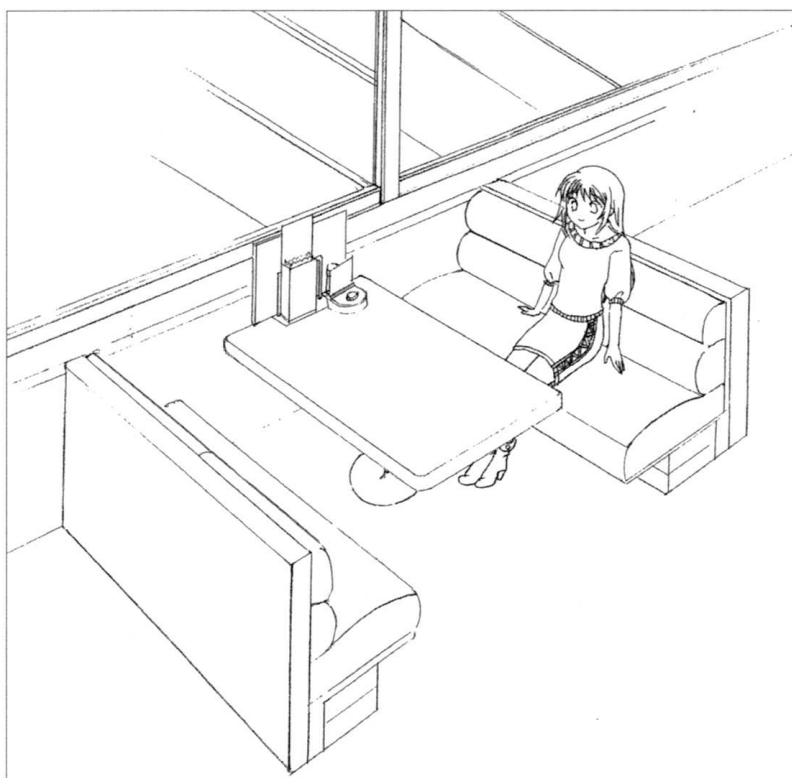
④ Give the tabletop volume and add the legs to finish.



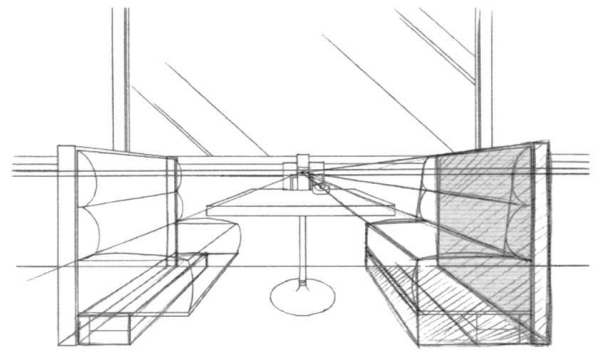
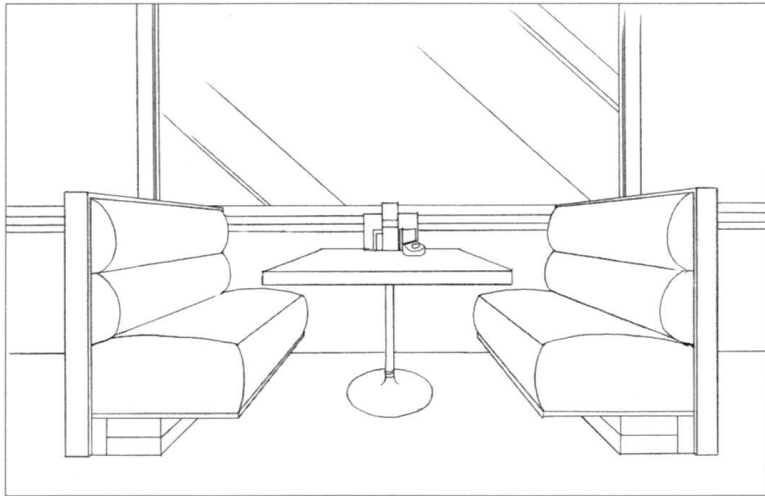
● Positioning Characters: Matching Figures with the Scale of Objects



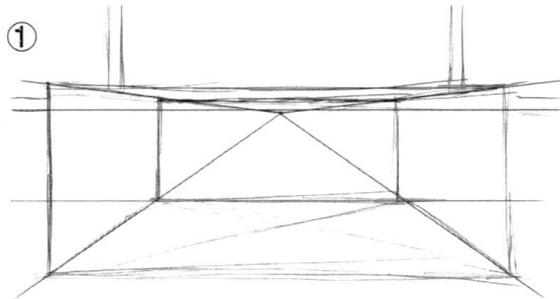
Using boxes to render a figure makes it easier to give the figure volume when composing from a high angle.



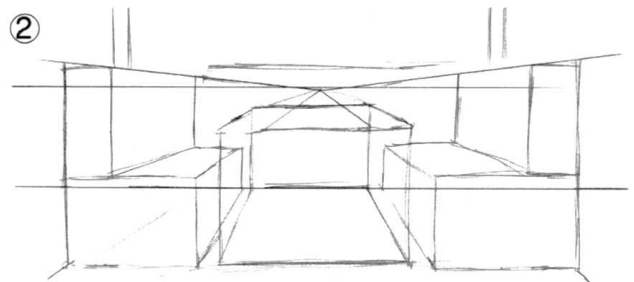
Drawing Booths II: Side View



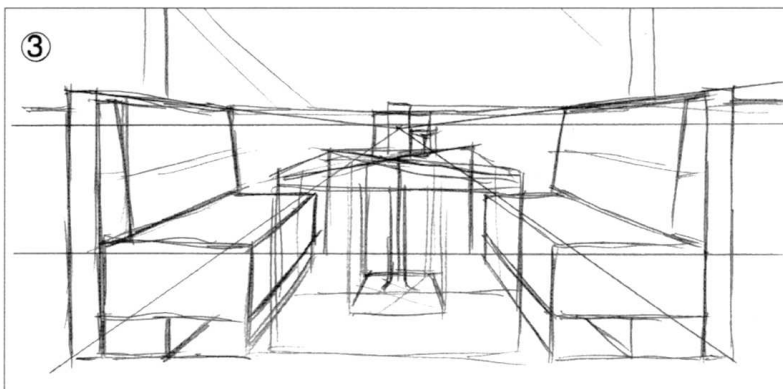
Sketch the floor and the board on which the cushion composing the seat's back is attached.



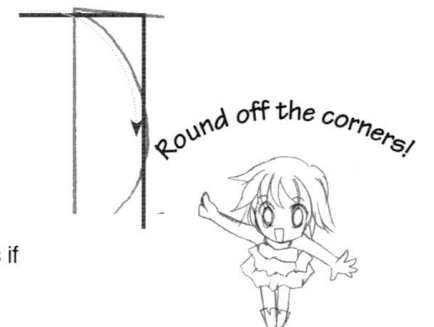
Render the booth overall using simple, rectangular forms.



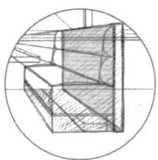
Render the seats and the table as simple boxes.



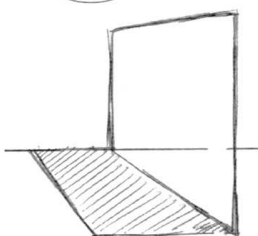
Adjust the shapes as if carving away at the original forms.



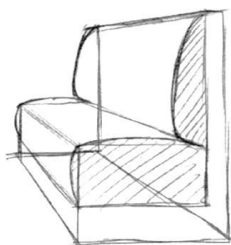
Drawing the Seats



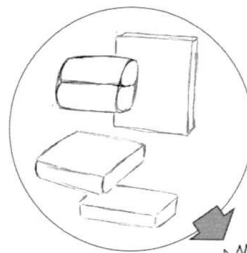
Let's look at the seat's boxy construction from a side view.



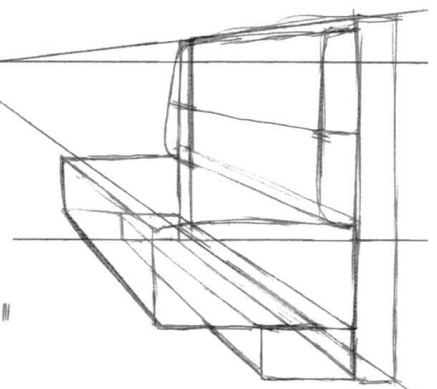
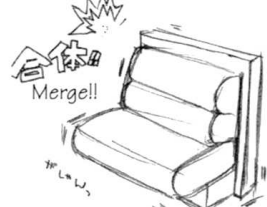
Define the floor underneath the seat.



Capture the seat's volume and form.

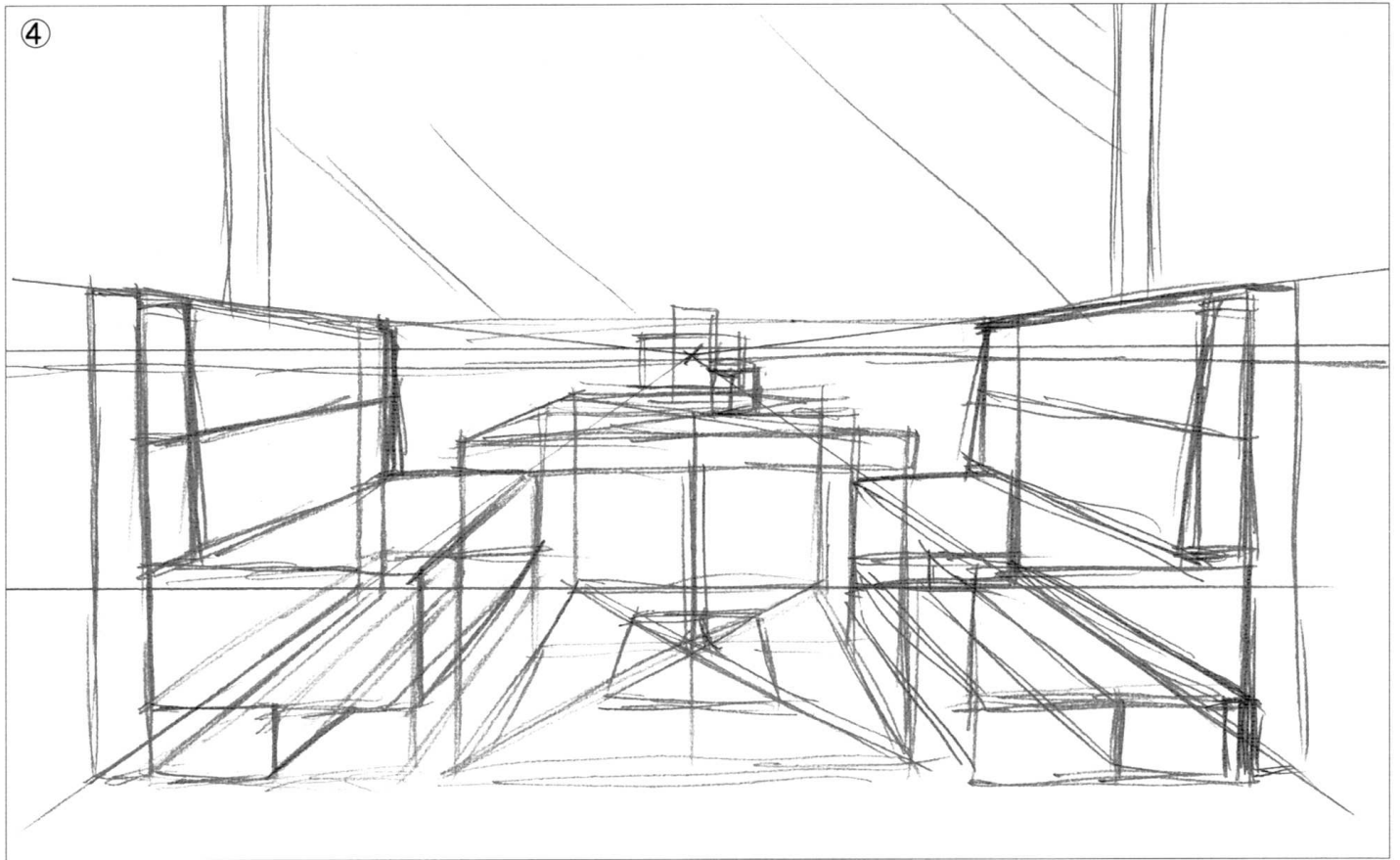


Seat Parts



Draw the seat, keeping in mind where the seat parts overlap.

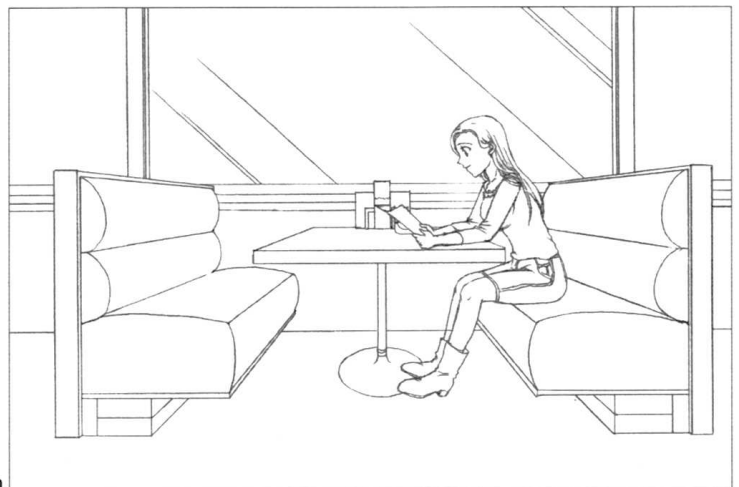
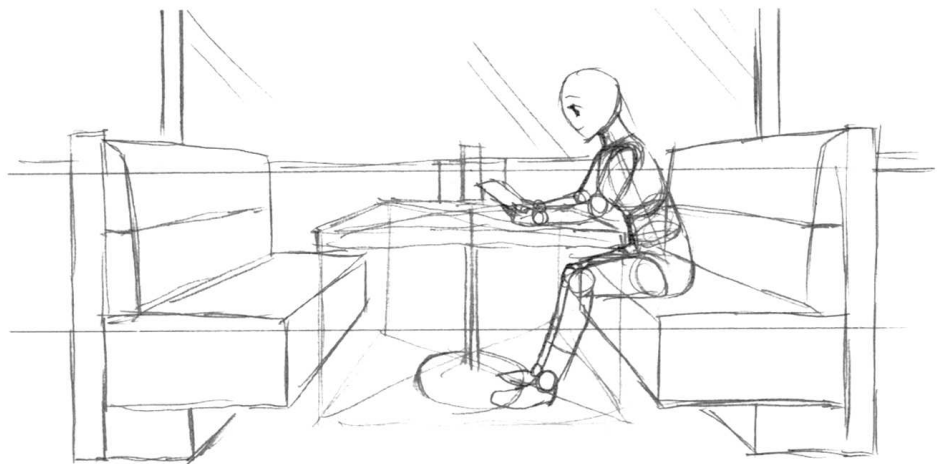
④



Clean up the lines to finish.

● Positioning Characters:

Booth seats in a family restaurant typically are tall enough so that the patron's legs below the knee touch the table's legs.



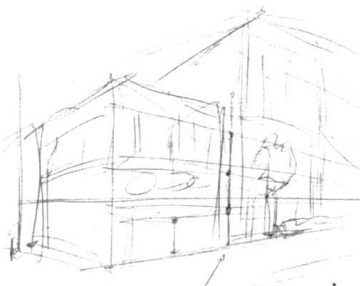
Final Composition

Fast Food Restaurants

Fast food restaurants tend to have glass façades and front entrances. Sketch the façade, remembering to match the scale to that of a human figure.



Drawing the Exterior View

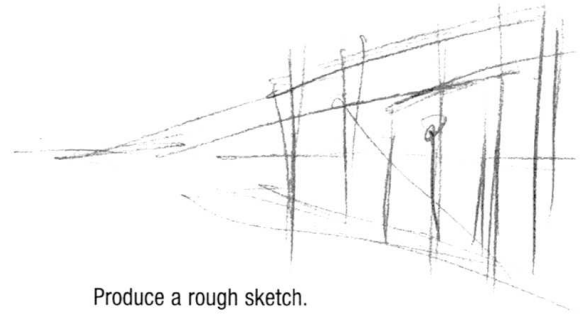


Rough Sketch

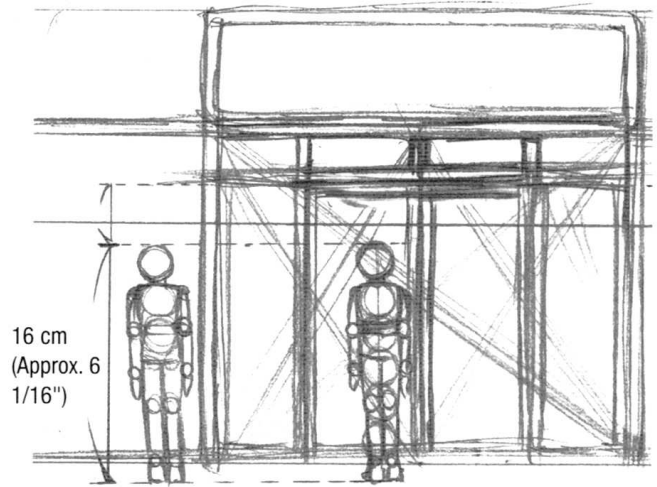


Sketch a mock-up figure near the front façade to establish the front entrance's height. Stack mock-up figures vertically and use them as a basis for determining how tall to make the building and where to position the second story, etc.

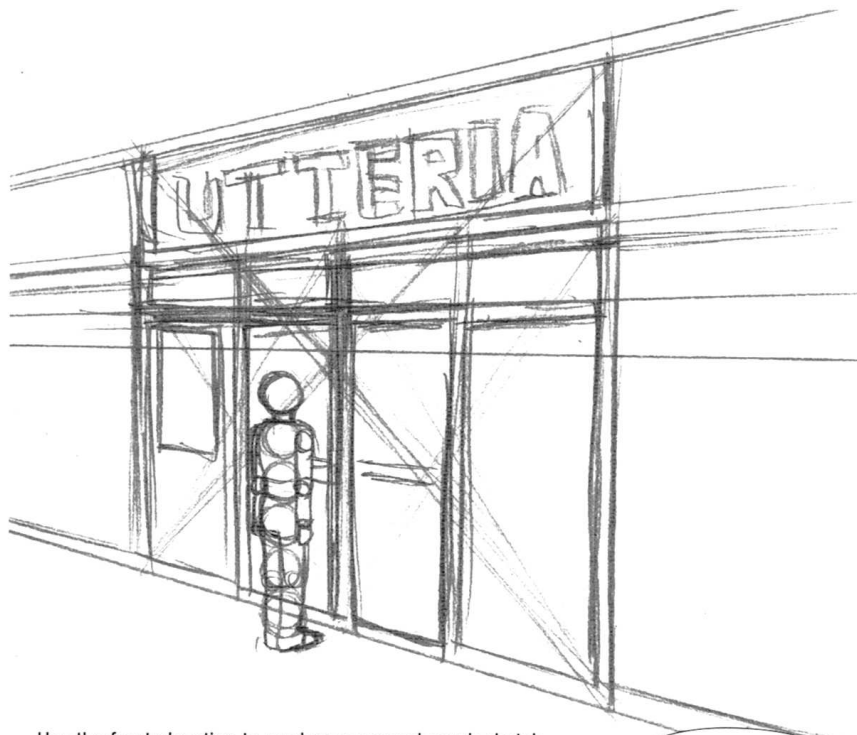
● Front Entrance



Produce a rough sketch.



Produce a rough front elevation sketch.



Use the front elevation to produce a second rough sketch.

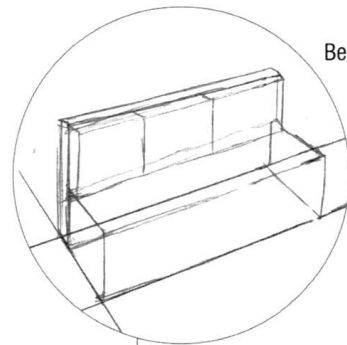
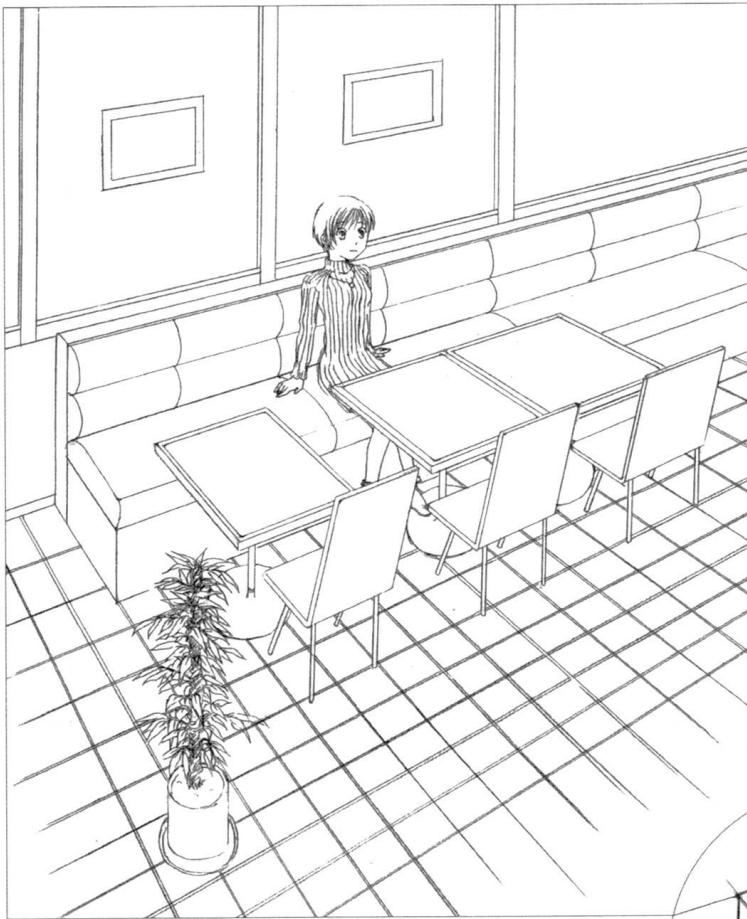
● Positioning Characters: Transferring Mock-up Figures



You could also add a close-up of a character.

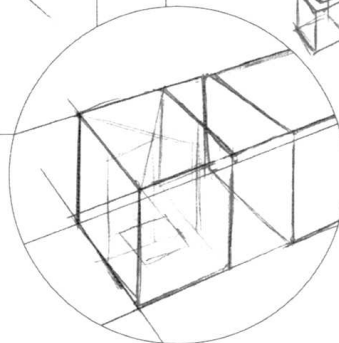
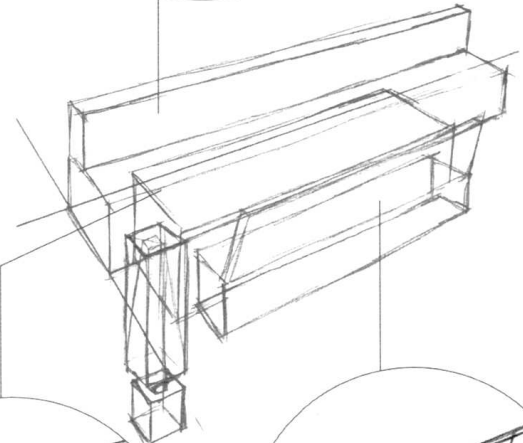


Drawing Fast Food Restaurant Interiors

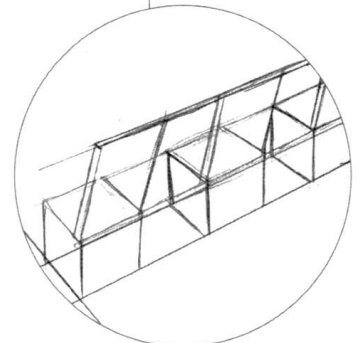


Bench Seat

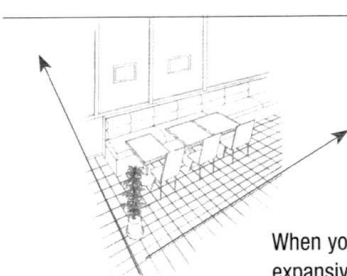
Render the bench as a solid object and then adjust the form.



The tables are oblong. (They are longer than they are wide.)



The bench seat is hard and does not have a cushion.

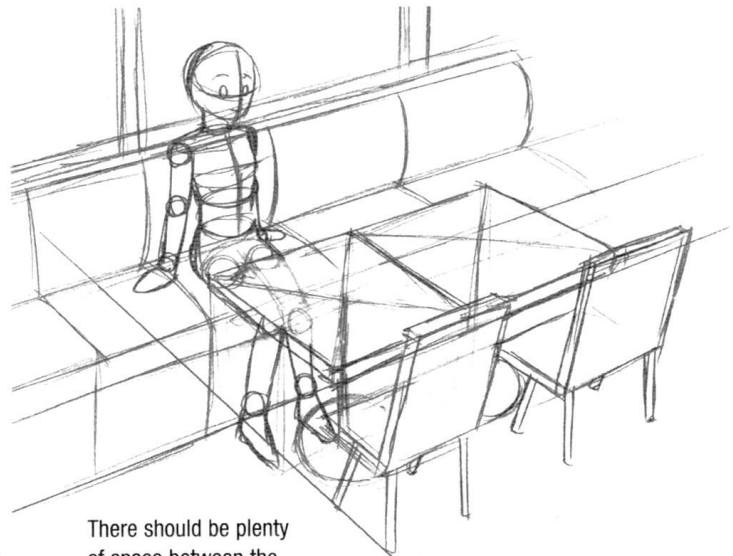


Horizon Line

When you intend to suggest an expansive interior, opt for two-point perspective.



The bench's seat is slightly elevated. The bottom of the character's feet should just graze the floor.



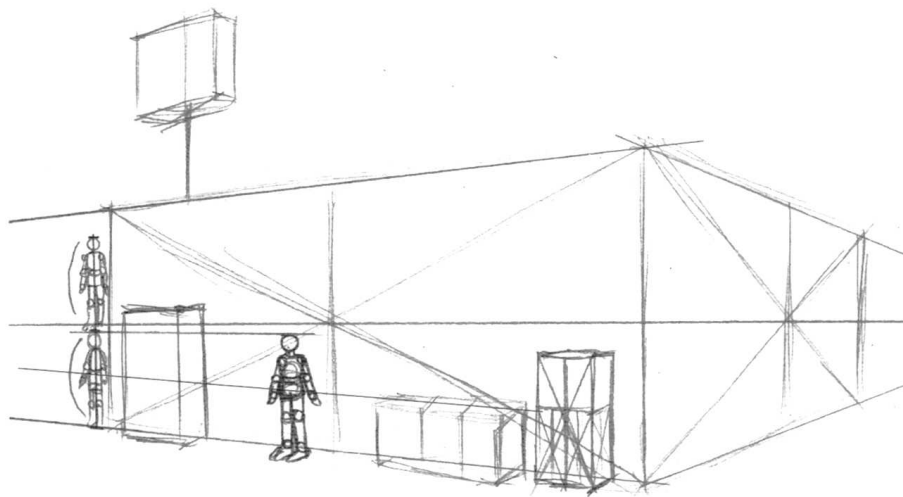
There should be plenty of space between the tables and the bench.

Convenience Stores

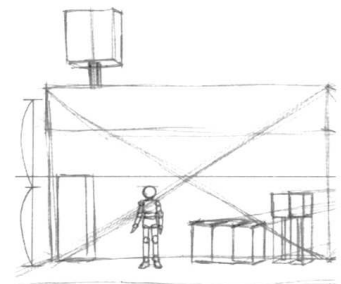
Convenience stores located on corner lots tend to have glass covering all of the sides facing a street. However, unlike a fast food restaurant, only the front entrance has glass that goes all the way to the ground.



Drawing the Exterior View



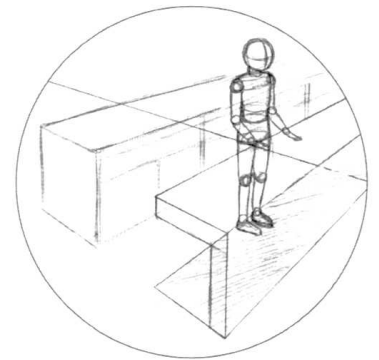
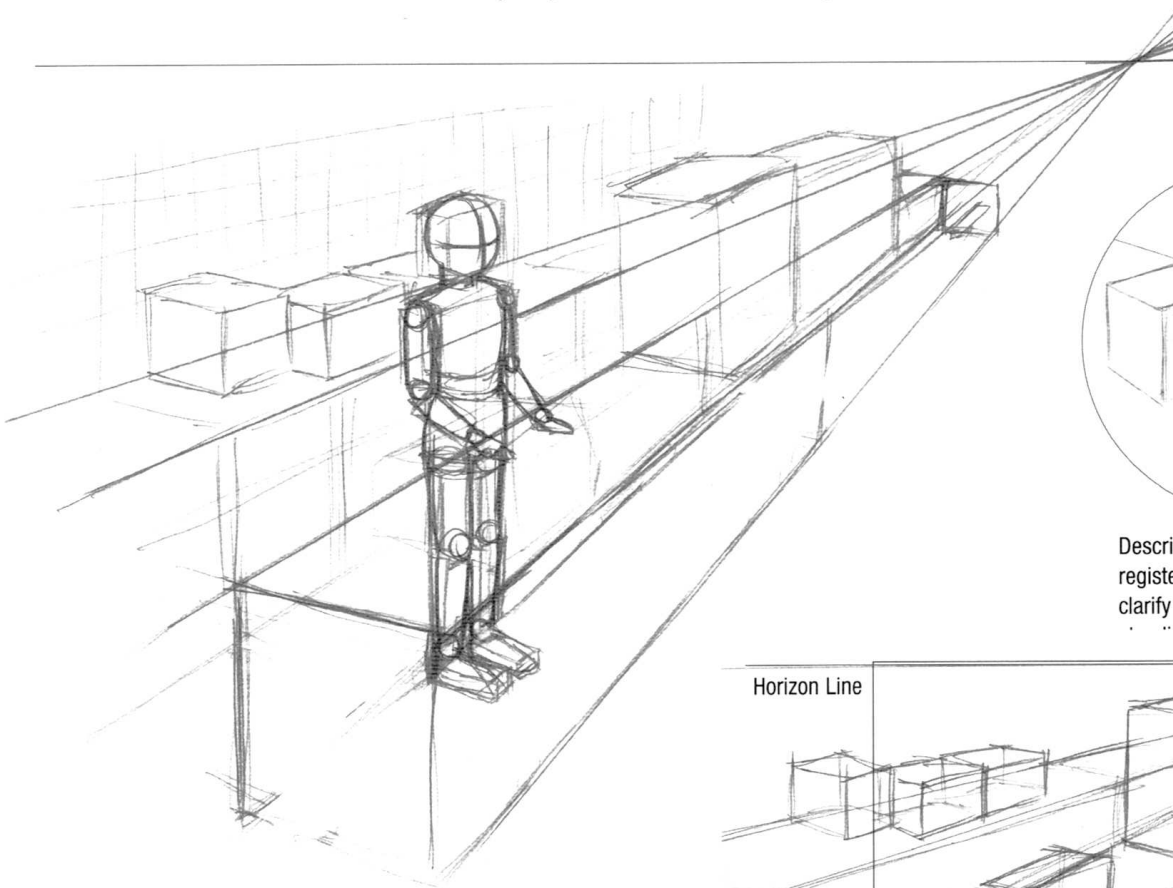
The convenience store's height should be slightly taller than twice a person's height. Go ahead and establish the scales of the trash bins and vending machines as well.



The above shows a front view study, focusing on scaling.



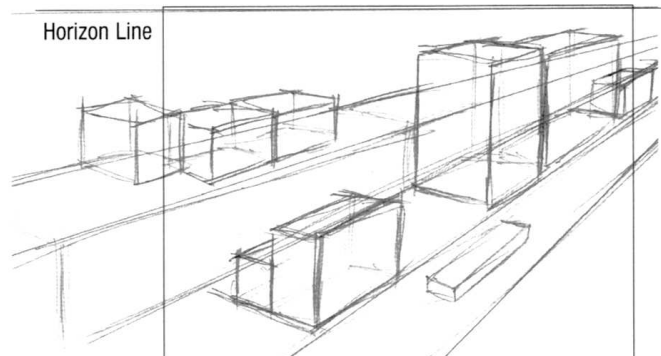
If the angle of depth is steep, then omit including details from the windows farthest from the picture plane.



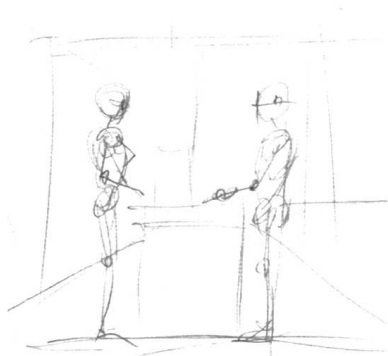
Describe the area underneath the register counter as a shadow to clarify where the character is

Sketch a layout of the character's head, rendering it as a box.

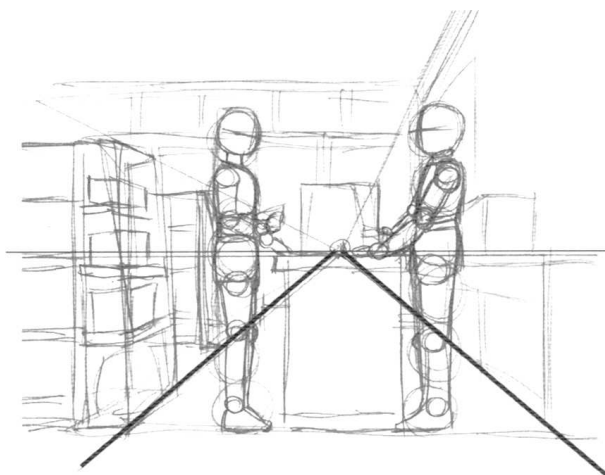
Horizon Line



Everything pictured exists within "the world below," which means that the top surfaces should be visible.



Rough Sketch



This is essentially the same as drawing a single street.



Incorrect



Although we can see shelves displaying products, the artist totally neglected to draw a floor line, resulting in an unsettling composition.

Correct



Even though there is space between the characters, simply including the background floor line and the wall line behind the male character creates the illusion of depth and pulls together the composition.

Creating a drawing in perspective that has "depth" and "expansiveness" gives the viewer a sense of stability.



Plants and Trees

Enriching Inorganic Spaces



The above shows a purely vertical and horizontal, impersonal composition.

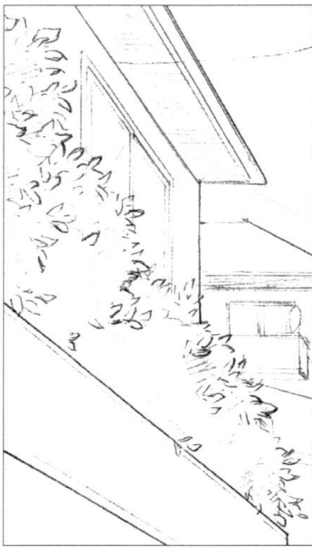


The tree breathes life into the composition.

Plants and trees add a verdant lushness to an otherwise purely vertical and horizontal, impersonal (inorganic) world.



Assorted Techniques for Rendering Plants and Trees



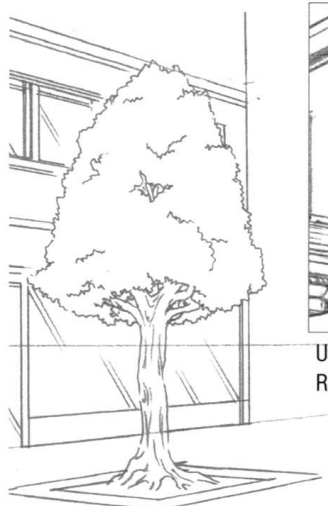
Sketching the Outline of Bushes or Trees and Then Adding Leaf Shapes



Using Hatching to Add Shadows



Drawing Each Leaf Individually



Drawing the Tree Trunk in Detail and Then Rendering the Leaves in General Terms

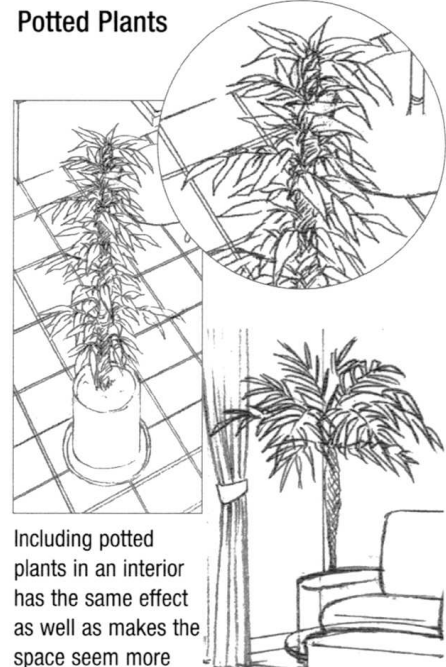


Using Hatching and Rendering Bushes in as Mounds or Rendering the Branches and Leaves in Defined Forms



Trees Rendered Almost Entirely in Silhouette

Potted Plants



Including potted plants in an interior has the same effect as well as makes the space seem more luxurious.

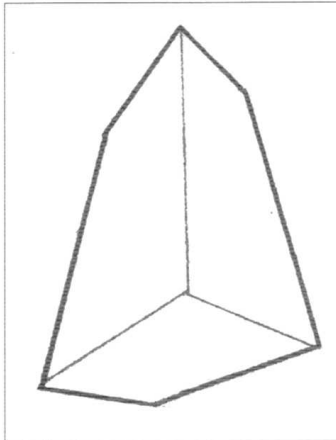
Chapter 3

Advanced Compositions Using Perspective

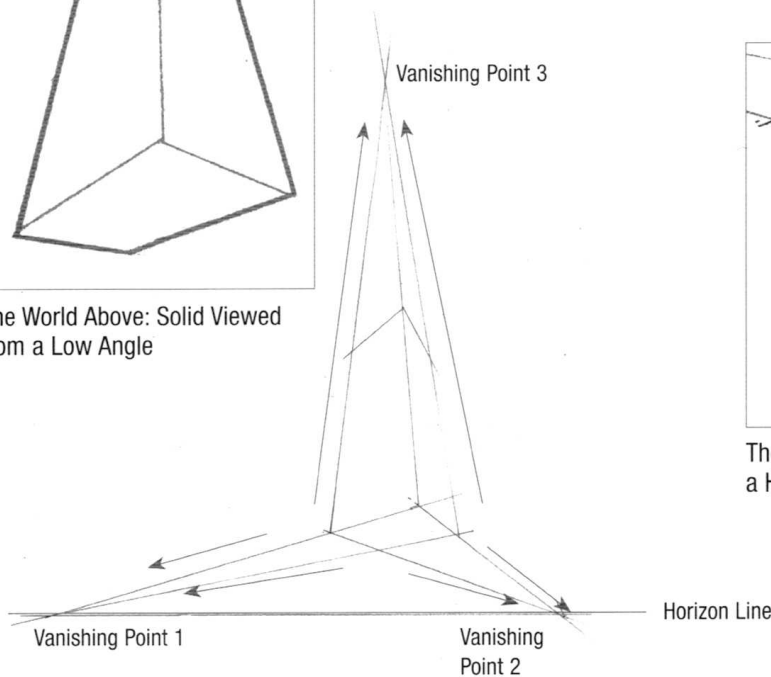


The Basics of Three-Point Perspective

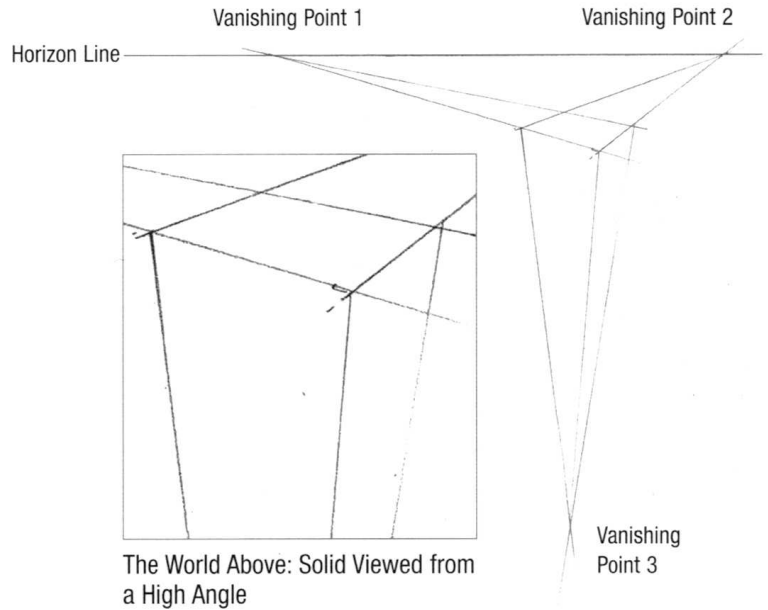
Solids Drawn in Three-Point Perspective May Exist in Either the World Above or Below



The World Above: Solid Viewed from a Low Angle



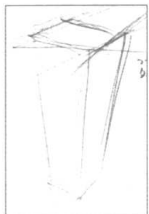
This perspective drawing technique consists of positioning a height (up or down) vanishing point. Thus, depth is created on the vertical and horizontal plane (i.e. the dimension of height) in addition to the right and left (i.e. the dimensions of width and depth). Artists use three-point perspective to create a dynamic three-dimensionality or a space that is expansive and has depth. In three-point perspective, the majority of lines used to render a three-dimensional solid are diagonal (i.e. most are depth lines).



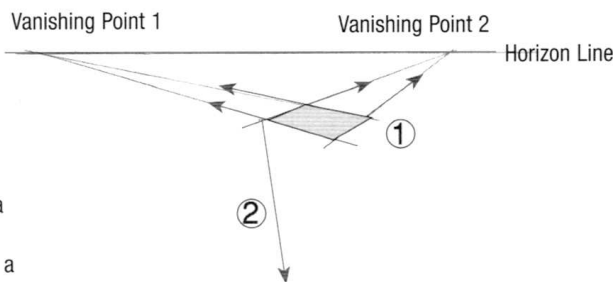
The World Above: Solid Viewed from a High Angle

The Sketching Process

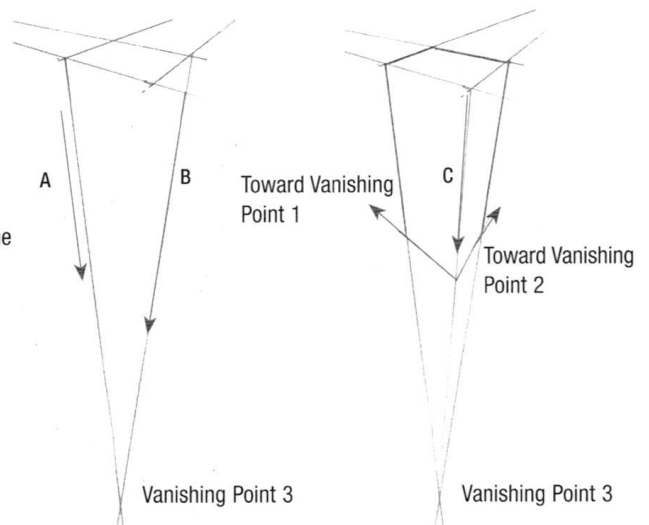
Visualize the target forms before starting to sketch.



The above shows a rough sketch of a building seen from a high angle.



- ① Establish the horizon line, establish Vanishing Points 1 and 2 so that the resulting top surface will appear similar to that in the rough sketch, and sketch a quadrangle.
- ② Draw diagonal lines moving in a downward direction so as to match the rough sketch.



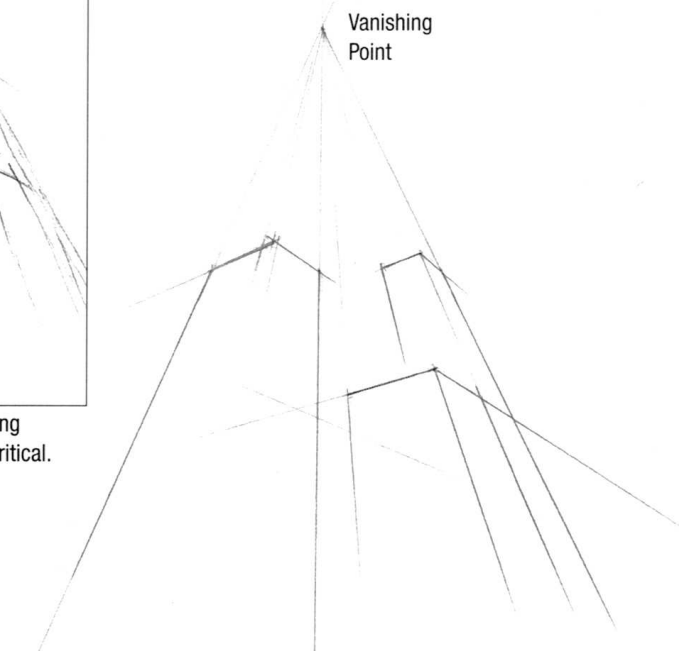
Draw Lines A and B while obtaining angles as similar to those appearing in the rough sketch as possible. Position Vanishing Point 3 where the two lines intersect.

Draw Line C moving toward Vanishing Point 3. Position and angle the lines toward the figure's underside so that they converge at Vanishing Points 1 and 2.

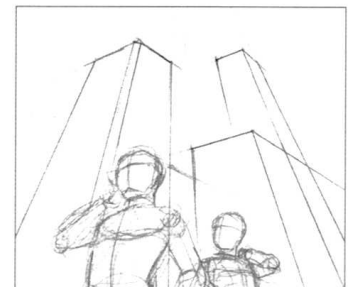
Common Low-Angle Composition: High Rise Buildings



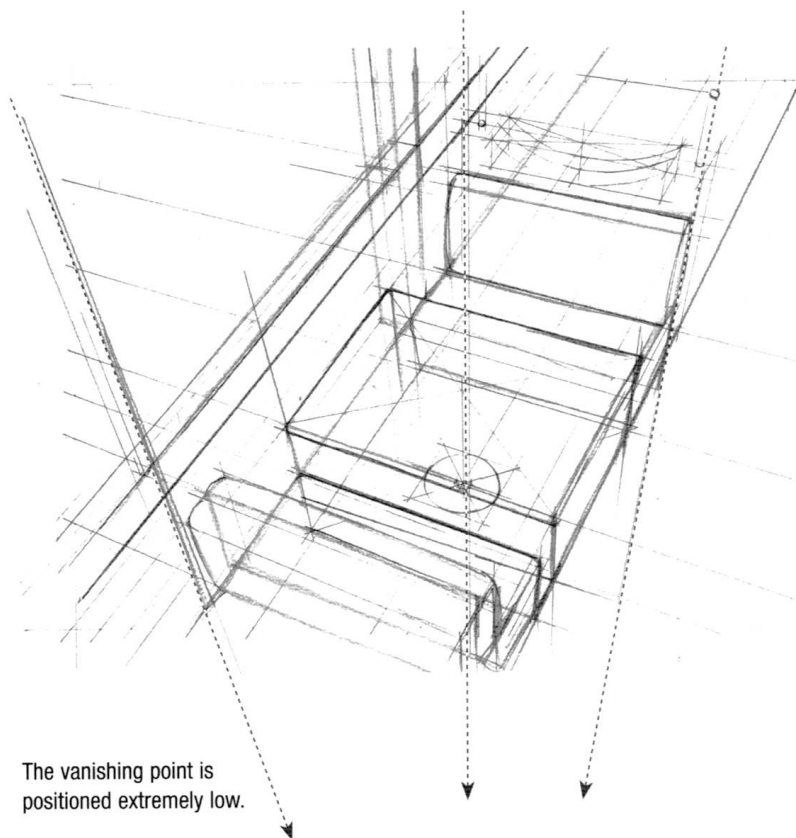
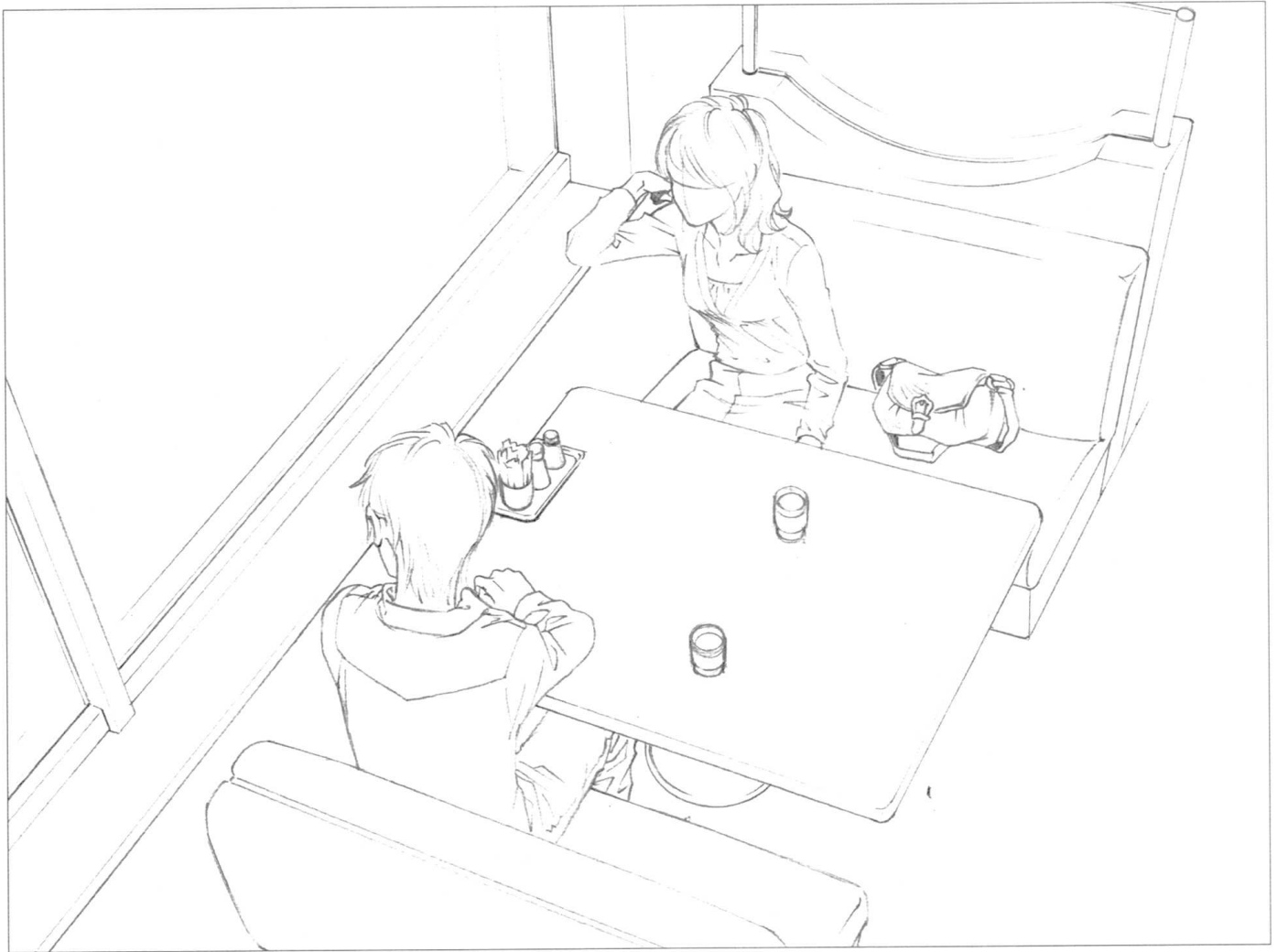
Having a rough sketch illustrating the buildings' degree of tilt is critical.



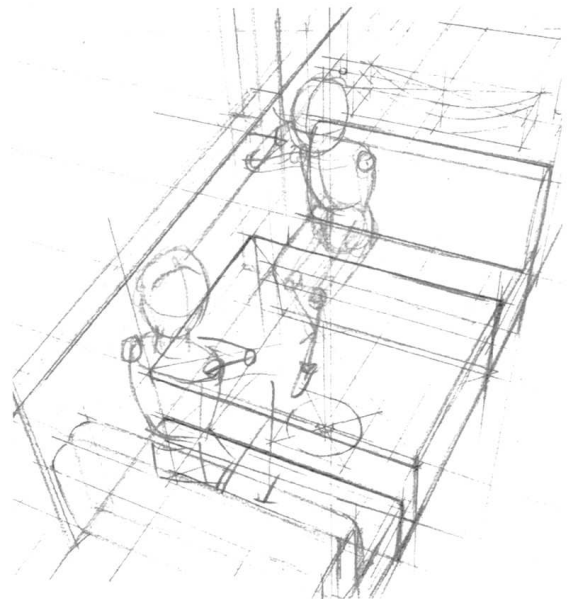
Artists often turn building corners into sharp angles. However, opting for a flat corner yields a more modern look.



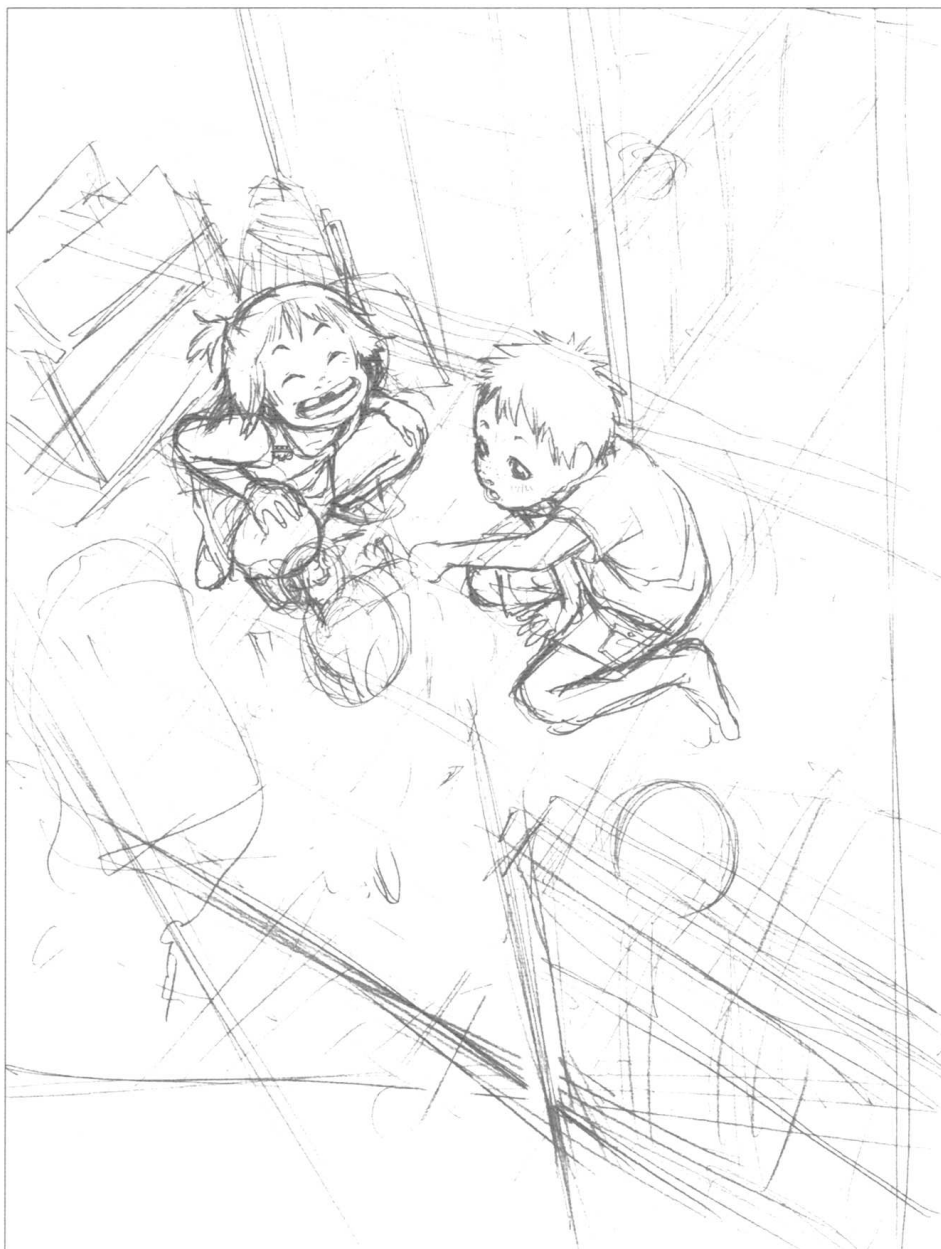
You might also foreshorten the characters.



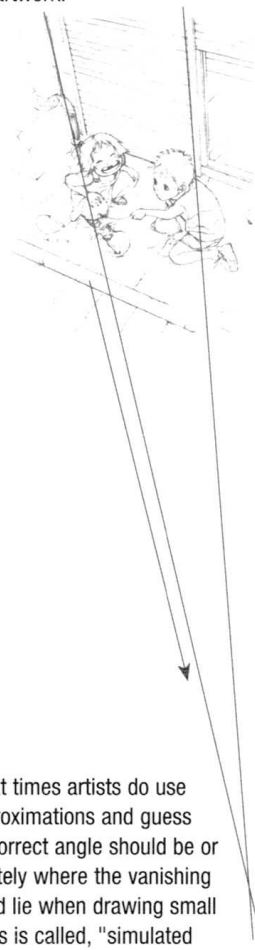
The vanishing point is positioned extremely low.



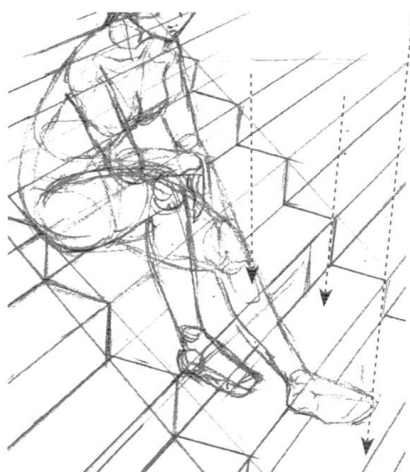
When reproducing this image, include those parts of the figures that the table and seats will obscure in the final composition.



Occasionally, the vanishing point will be located so far away that your straightedge will not reach it. Even still, adding extra sheets of paper and then drawing the primary lines precisely with a straightedge is the key to achieving attractive artwork.



However, at times artists do use visual approximations and guess what the correct angle should be or approximately where the vanishing point would lie when drawing small panels. This is called, "simulated three-point perspective."



When drawing steps from a high angle, "simulated three-point perspective" gives the composition a more natural look.



If the final panel will only be about this size, then an artist might opt for "simulated three-point perspective."

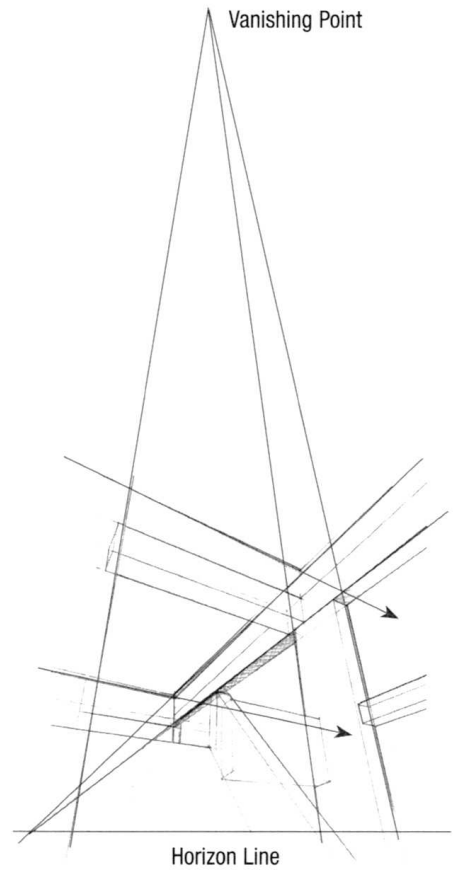
Compositions Portraying High or Low Angles

Portraying Low Angles

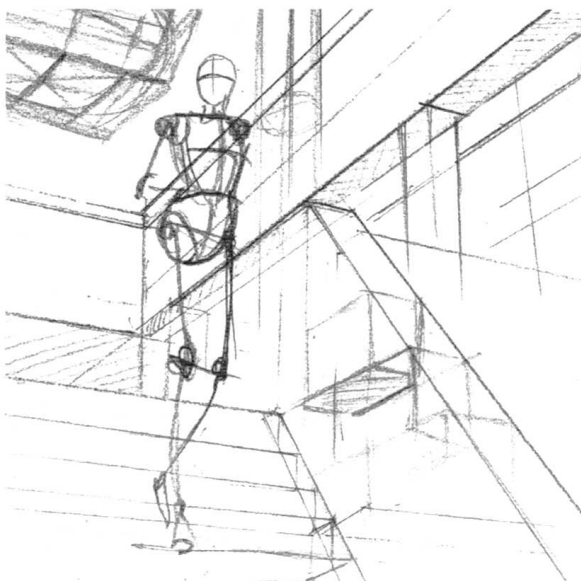
At a Luxury Hotel: The Heroine Descending a Staircase



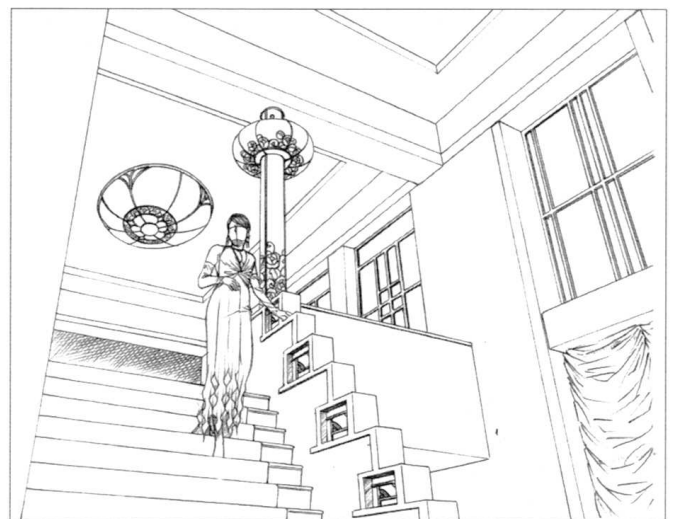
● Creating a Composition Using Three-Point Perspective and a Vanishing Point for the Staircase



A vanishing point located toward the composition's lower left gives the scene depth. Consider setting the vanishing points to the right and left far apart to create width and depth lines that are virtually parallel to prevent the composition from appearing unnaturally distorted.



This shows the character drawn as a sketching manikin and three-dimensional solids rendered in a simplified manner.

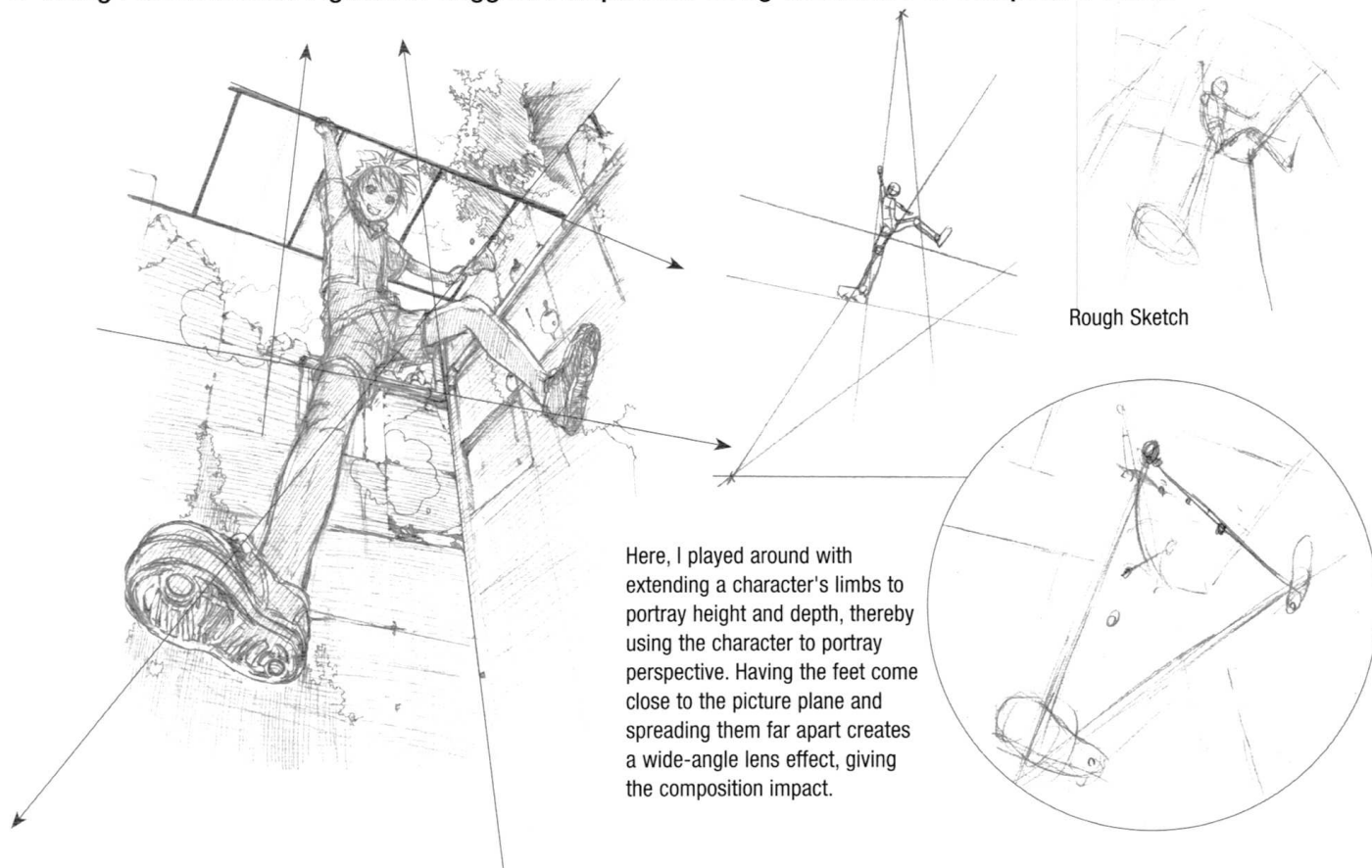


Positioning the corner of a pilaster near the picture plane enhances the sense of opulence and distinguishes this interior from that of a typical building or a house.

Use Three-Point Perspective and Low-Angle Compositions to Create the Expansive Interiors of Large Buildings



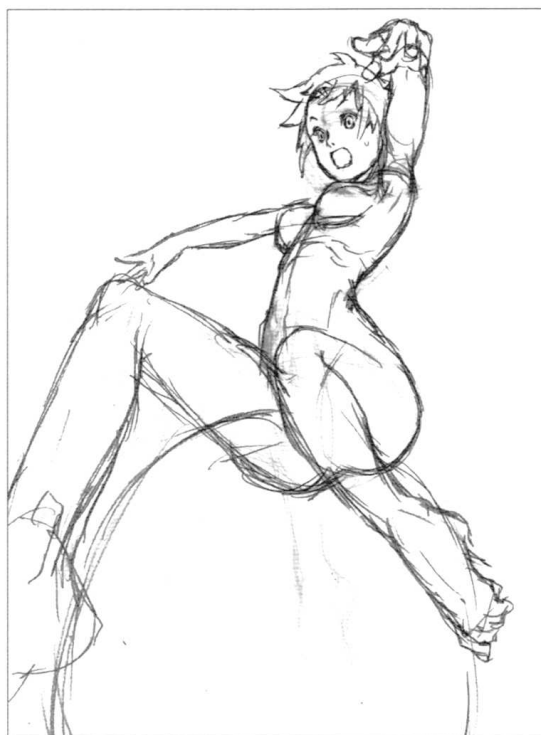
● Using Foreshortened Figures to Suggest Perspective: Using Characters to Compose a Scene



Experimenting with Using Figures to Portray Perspective



Level 1: Standard, Low-Angle Composition

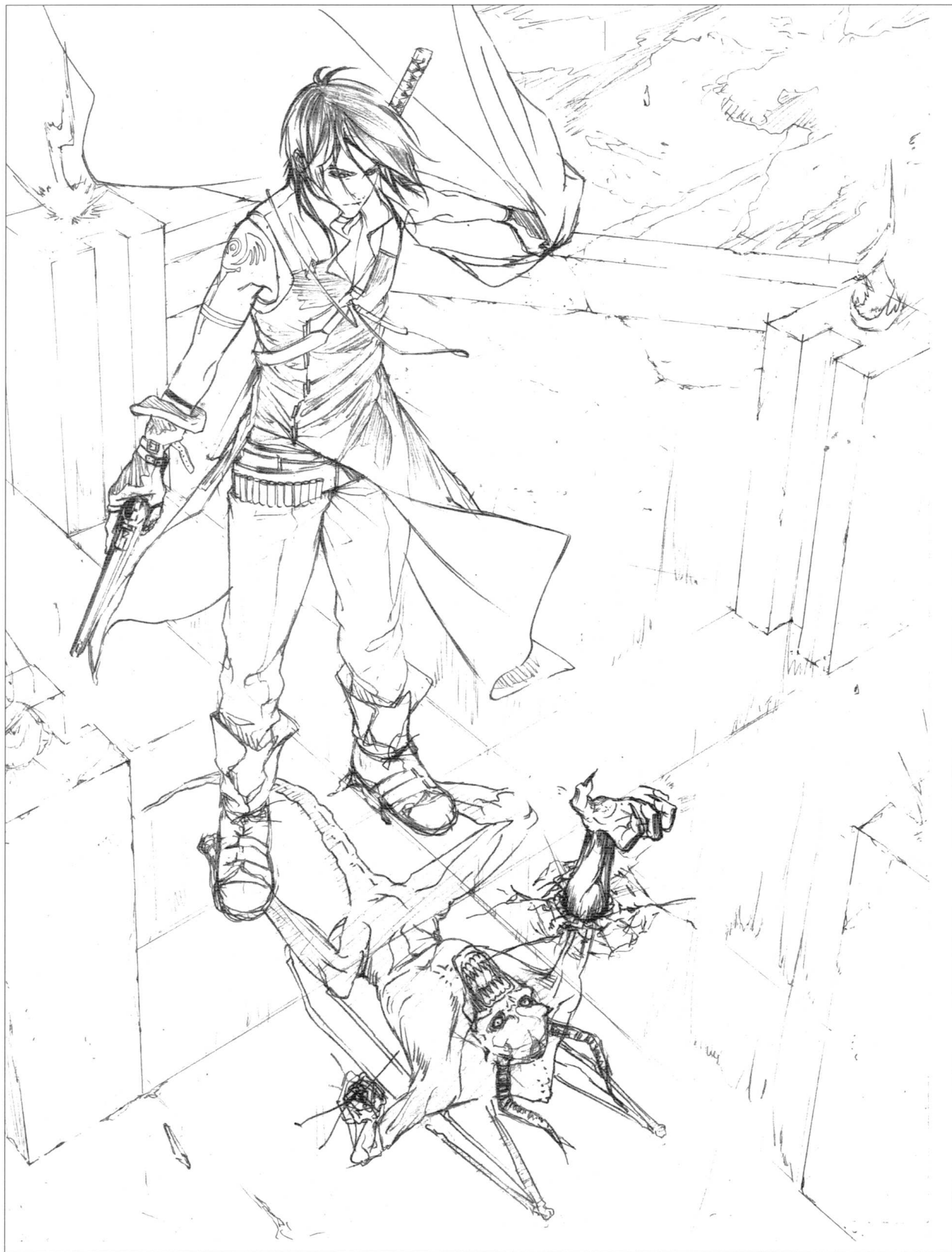


Level 2: Here, spreading the feet, which are close to the picture plane, wide apart and enlarging them results in adding a wide-angle feel to the low-angle composition.

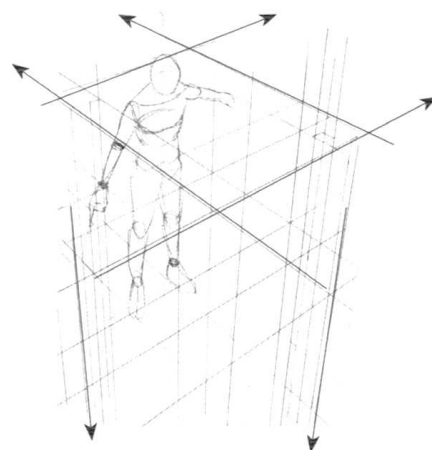
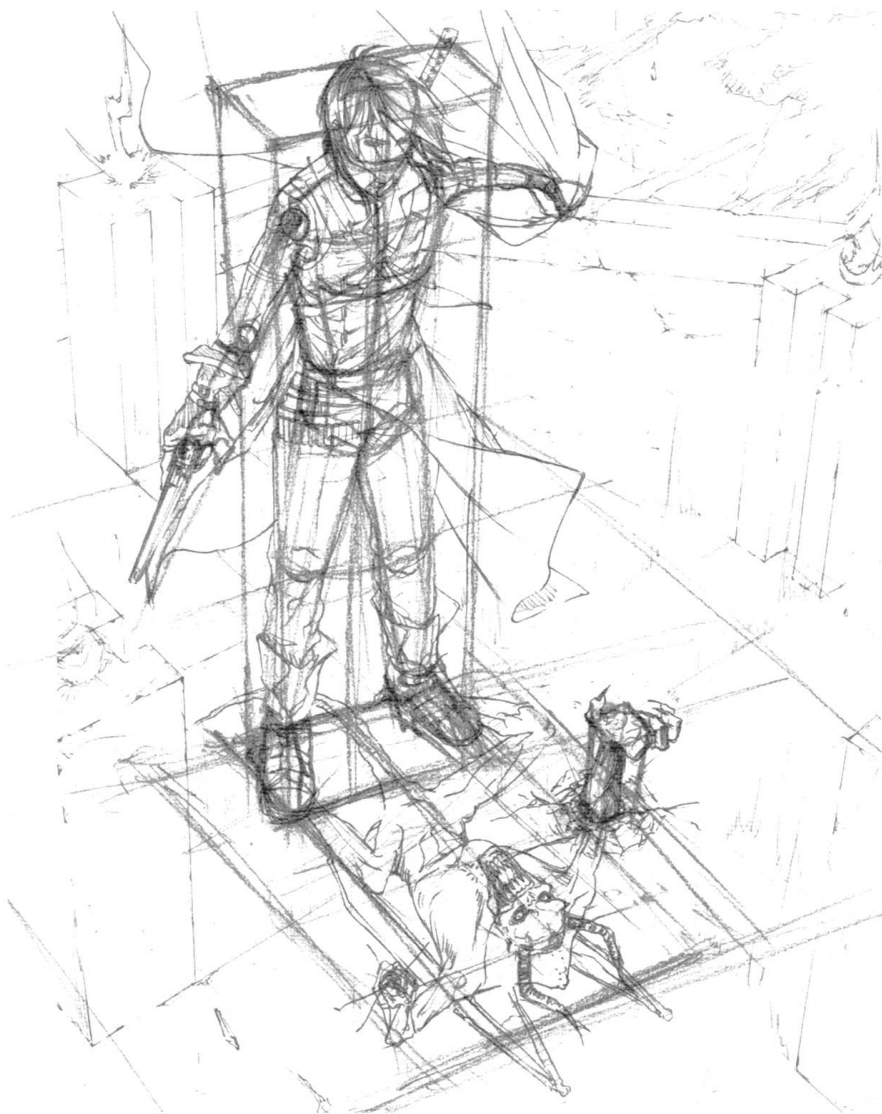


Level 3: Now we have the form appearing in the original composition.

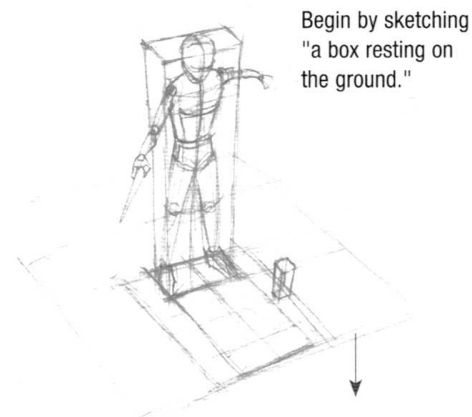
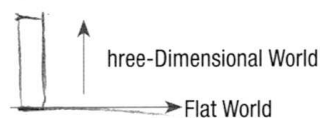
Use Three-Point Perspective and Low Angle Compositions to Generate Impact



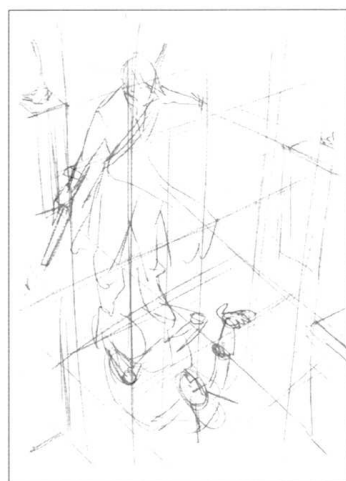
● Creating a Composition Where a Flat World Intersects with a Three-Dimensional World



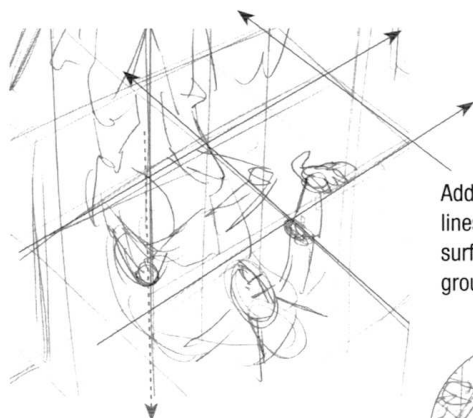
Vanishing points spaced far apart give all the directions portrayed in this composition a natural feel.



Begin by sketching "a box resting on the ground."

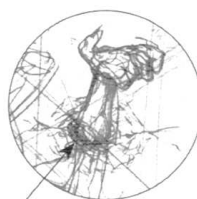


Rough Sketch

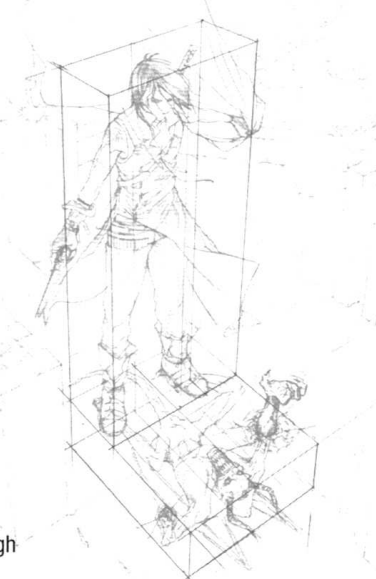


Draw an almost perfectly vertical line at the warrior's feet. This will allow you to create a vertical sense of depth.

Add a grid of layout lines to create a flat surface (the ground).



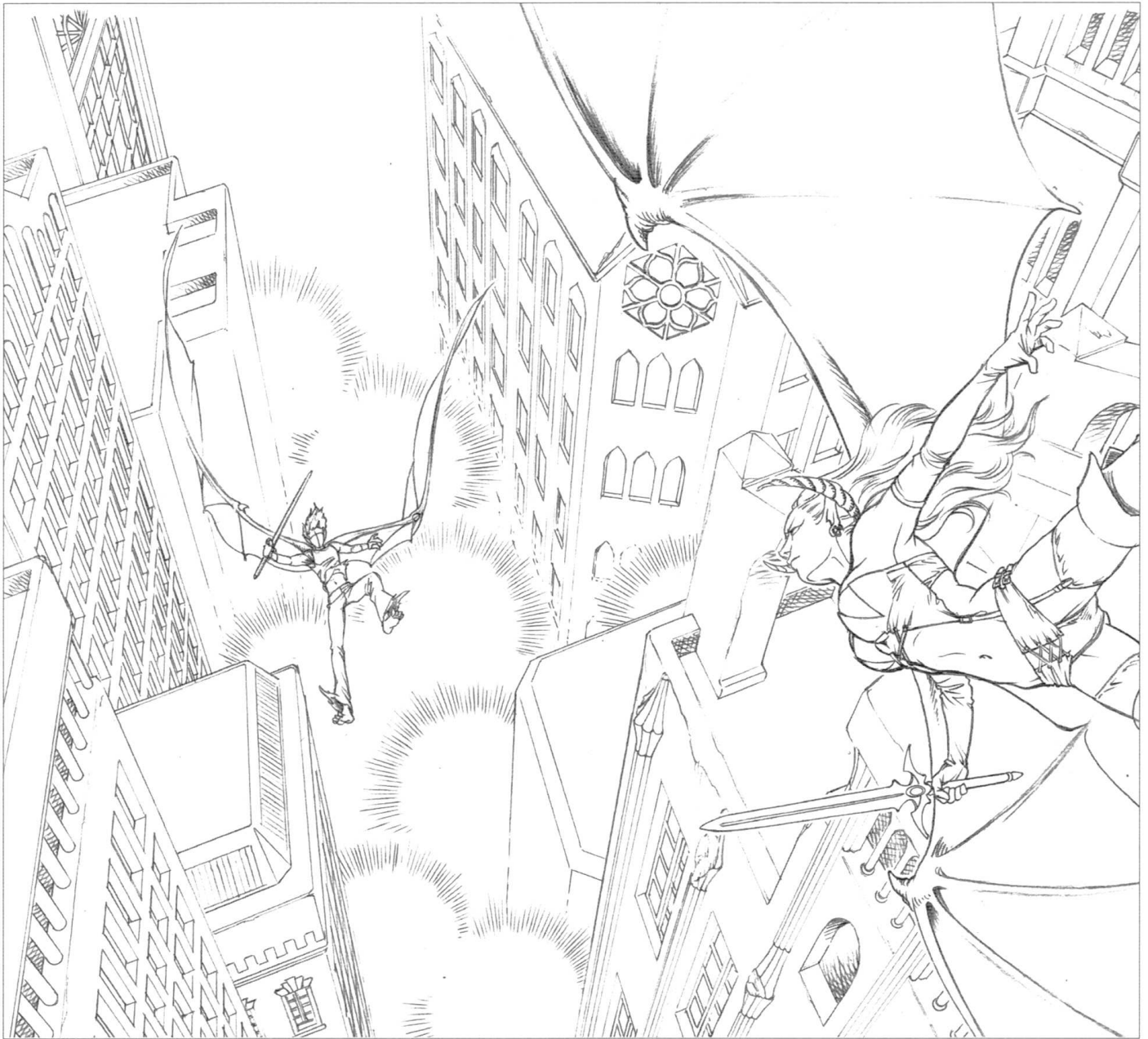
This shows the arm breaking through the ground. Here, the curve of the ellipse used to define the arm's section plays a key role in giving the arm a sense of volume and portraying the ground as a flat surface.



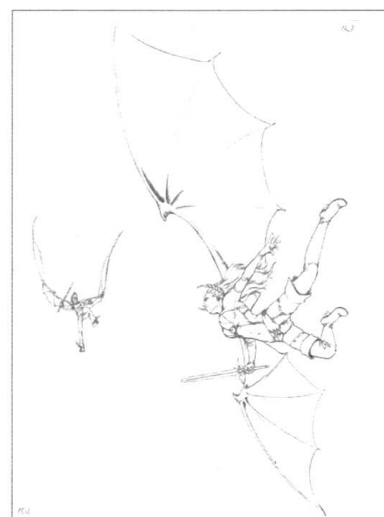
The artist composed the demon by drawing him in a box as well.

Use Three-Point Perspective and High Angle Compositions to Communicate Situations in a Clear yet Dramatic Way

In the Sky over Tall Buildings: An Aerial Battle with an Evil Demigod



Background



Characters

● Creating a Composition That Portrays "Midair Flight" over Crowded Buildings Viewed from a High Angle

Depth Vanishing Point

Horizon Line

Width Line

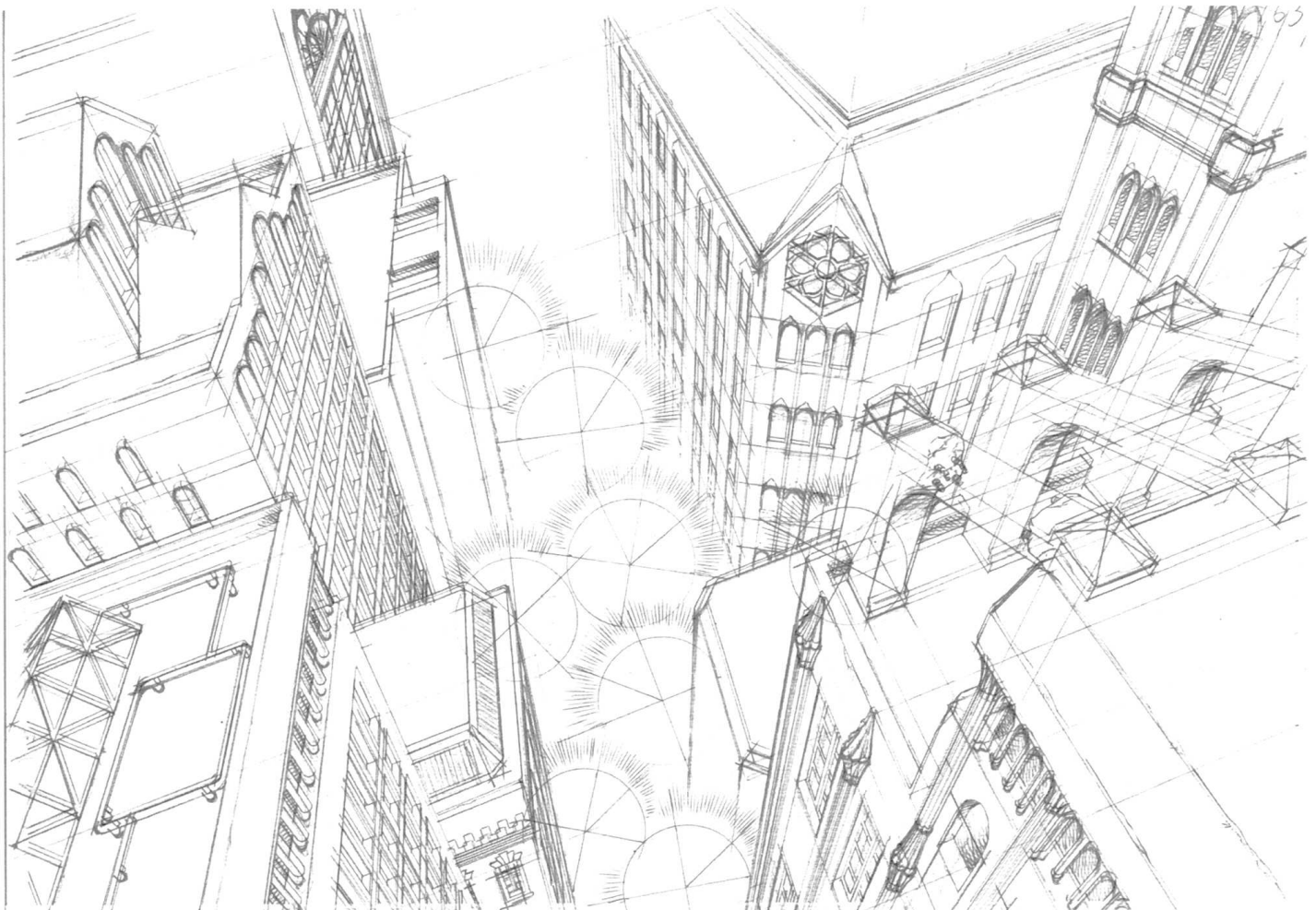
The width lines are drawn parallel to each other, creating the sense of two-point perspective.

Height Vanishing Point

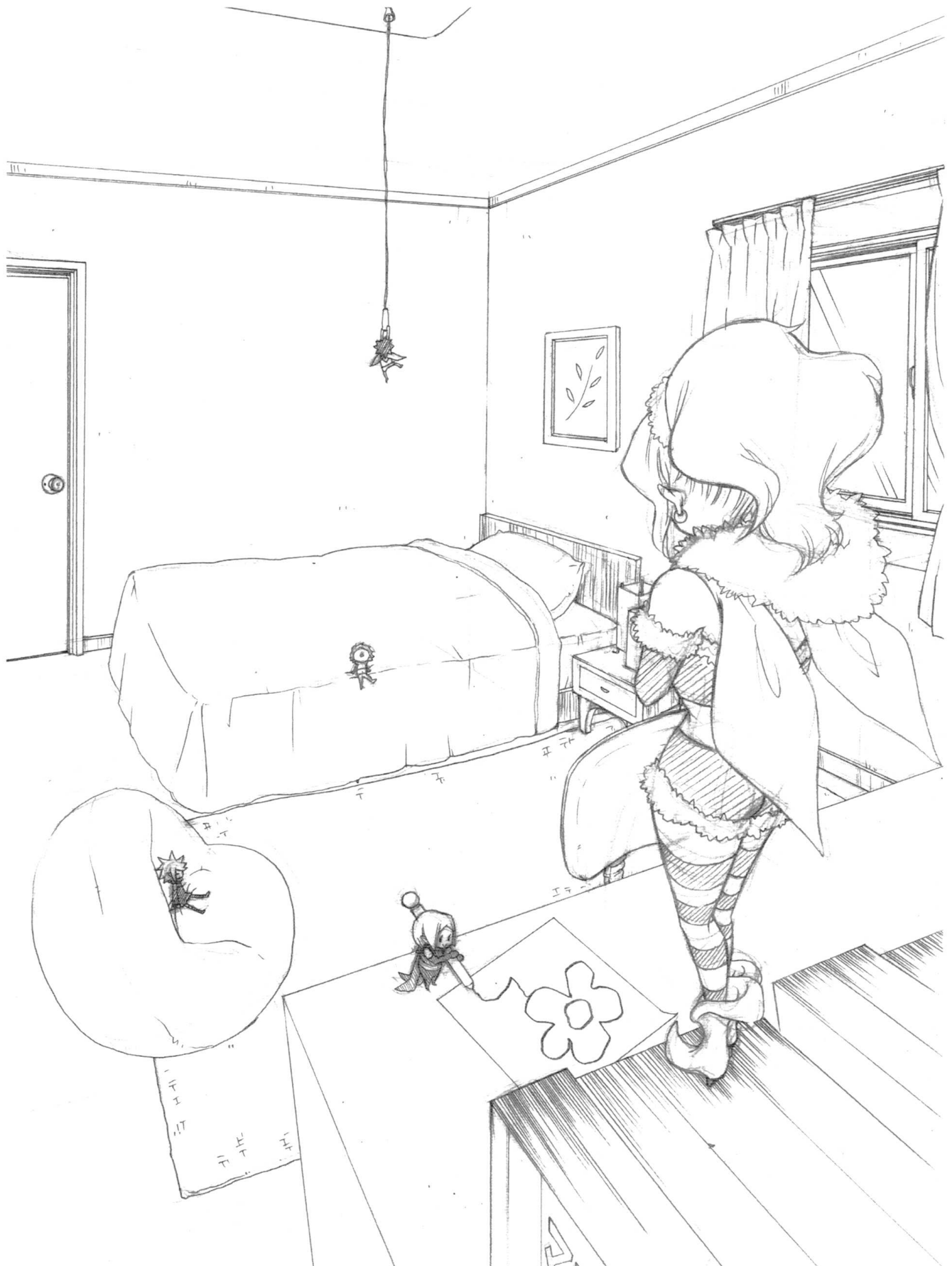
The buildings have multiple depth vanishing points. While this means that the buildings are not orderly lined up along a single road, it also serves to shake up the scene's expanse and enhance the composition's sense of depth.

Width Line

Width lines are typically drawn parallel to the horizon line in standard two-point perspective. However, by tilting the width lines with respect to the horizon line, the artist can make the viewer feel the same sense of expansiveness that two-point perspective creates.

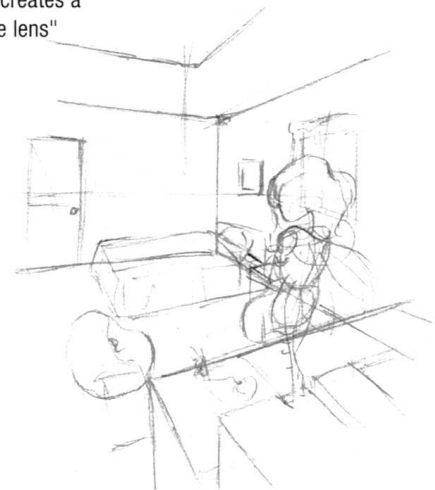
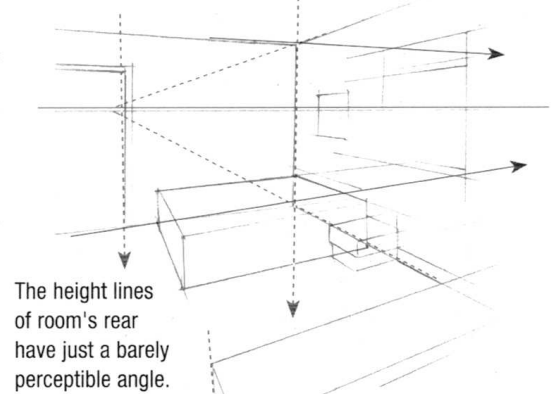
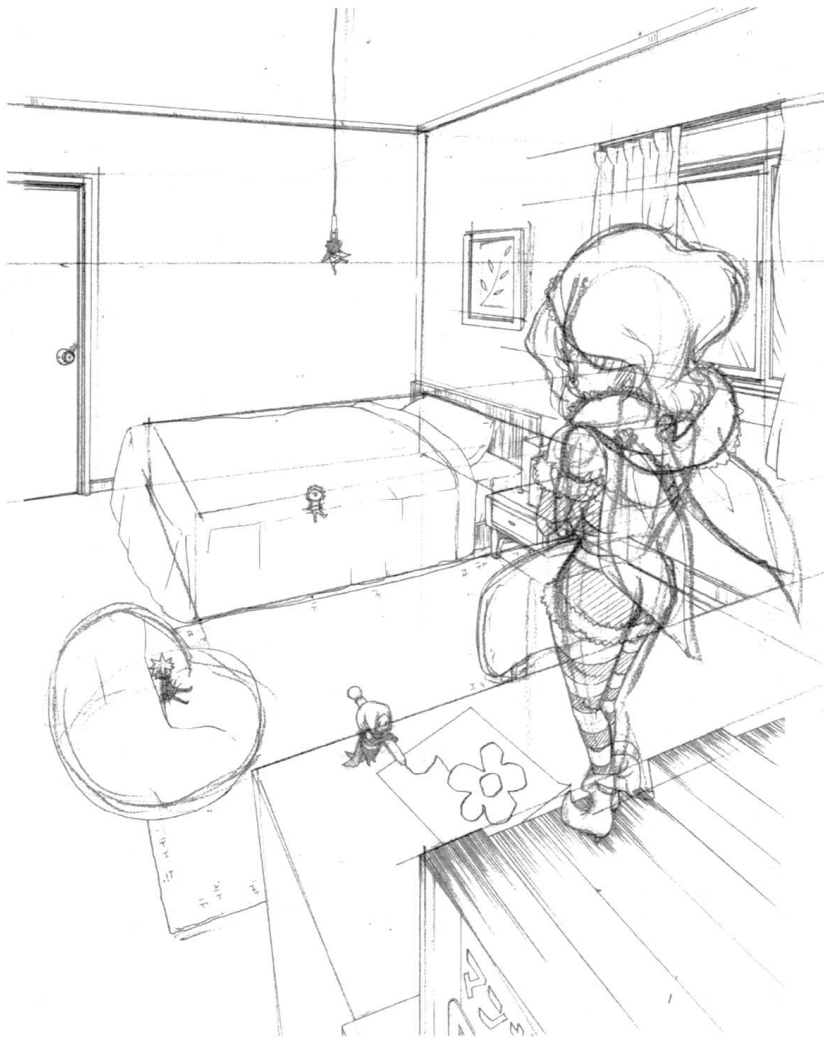


Use Modified Two-Point Perspective to Portray "In Midair, High above the Ground"



● Creating Compositions of Rooms That Emphasize Expanse and Depth

Draw the room in standard two-point perspective, while using "simulated three-point perspective" for the height.

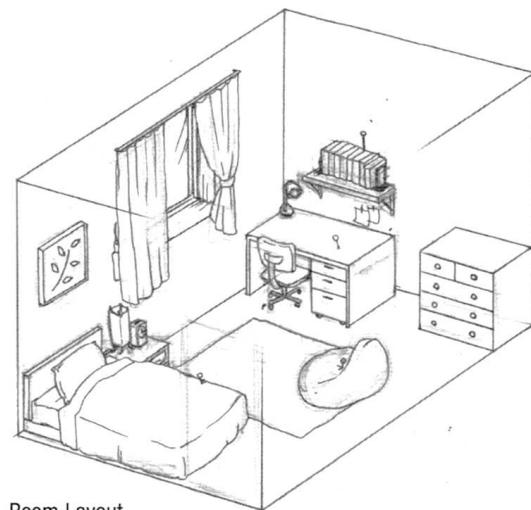


Make the characters appear tiny with respect to the objects in the room. This will make the room appear larger.

Setting up to Achieve the Desired Portrayal



The artist sized the doll to be approximately as big as a girl's head.



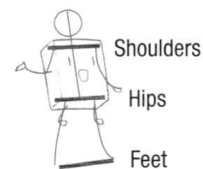
Room Layout

Use Three-Point Perspective and High Angle Compositions to Make a Room Appear Expansive

Seated Characters Drawn in Perspective

Seated on a Bench Two-Point Perspective

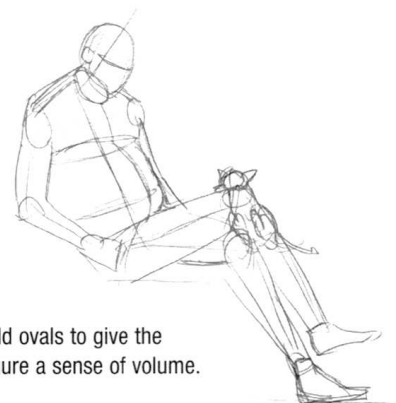
Rendering figures' shoulders, hips, and feet in perspective is a visually effective technique.



① Produce a rough sketch.



Draw the bench as a simple box and sketch the figure as a nude while adding some sense of foreshortening.

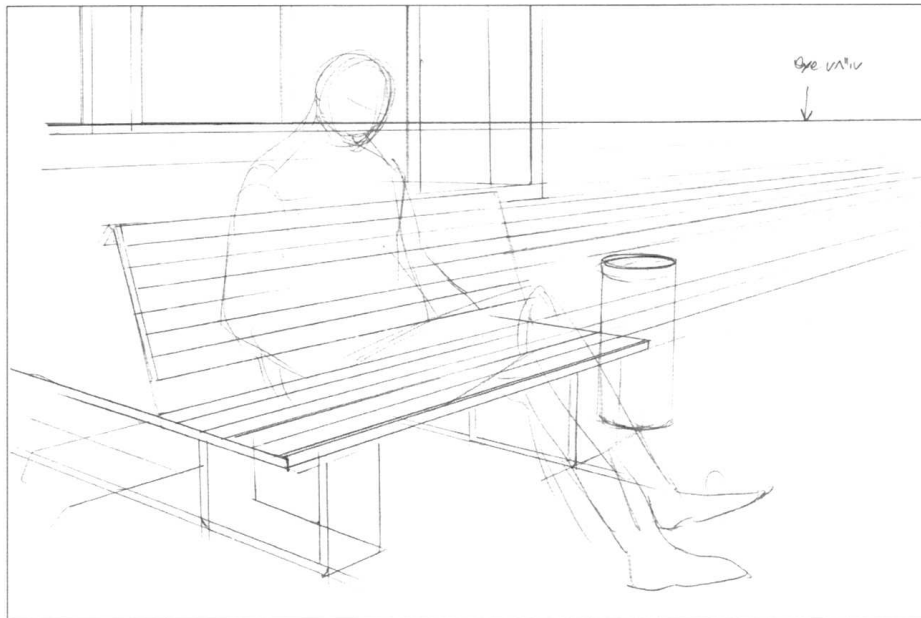


Add ovals to give the figure a sense of volume.



Horizon Line

② Sketch the background, maintaining awareness of the perspective.



Lines connecting the character's shoulders, hips, and feet should converge toward the same vanishing point as those of the bench.

③ Draw the setting accurately in perspective and add the bench, the house in the background, and other elements.

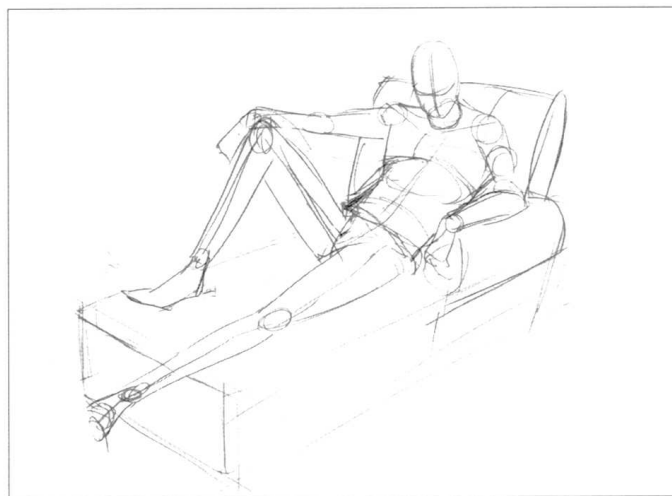


Final Composition

Reclining on a Chaise Lounge Two-Point Perspective

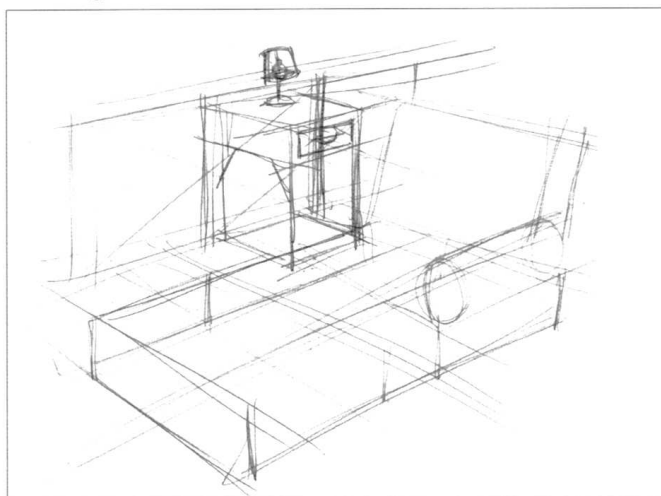


① Produce a rough sketch.

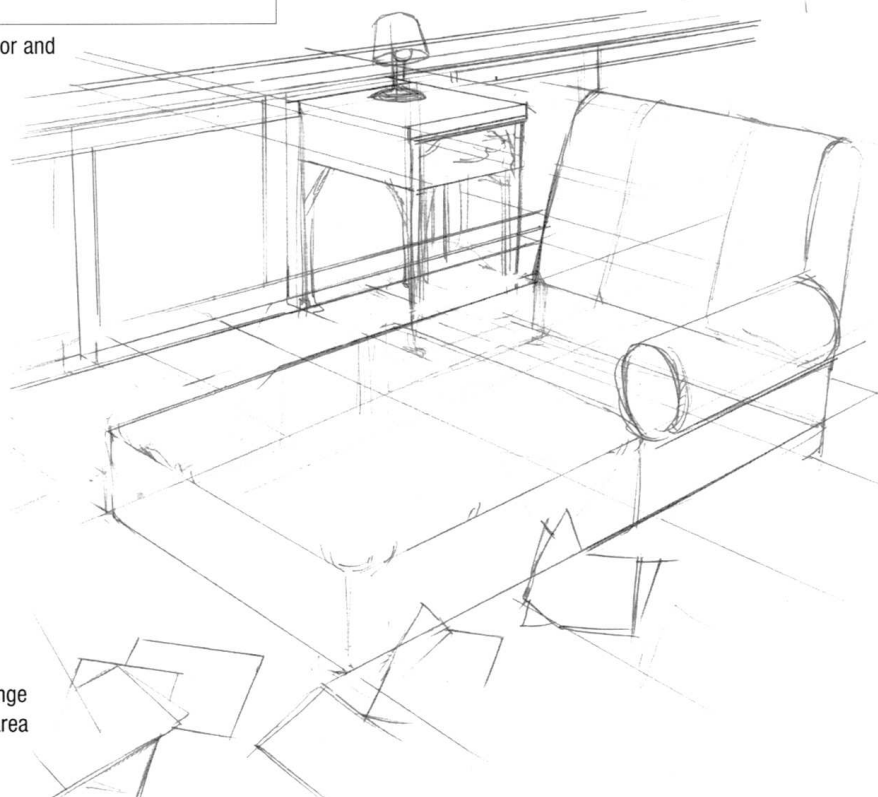
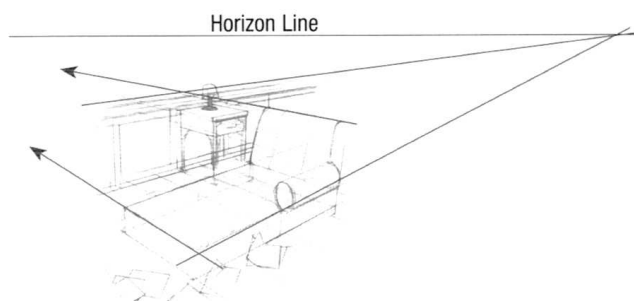


② Render the chaise lounge and the character as simple solid objects. This constitutes the composition's layout.

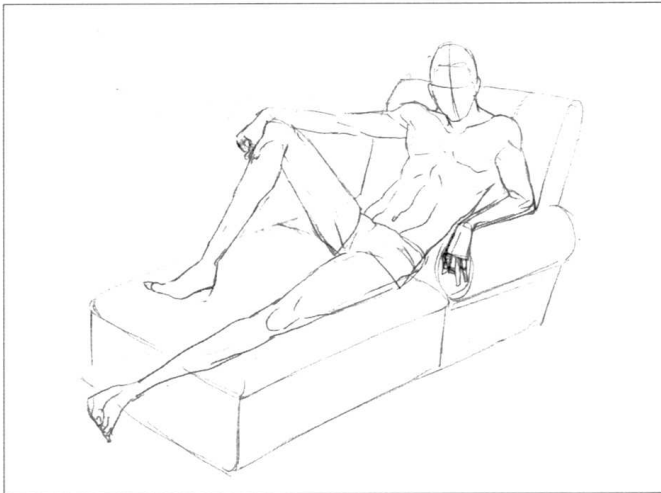
Sketching the Room's Interior



① Draw a rough sketch of the room's interior and objects surrounding the chaise lounge.



② The chaise lounge and surrounding area are now finished.



③ Sketch the character nude.



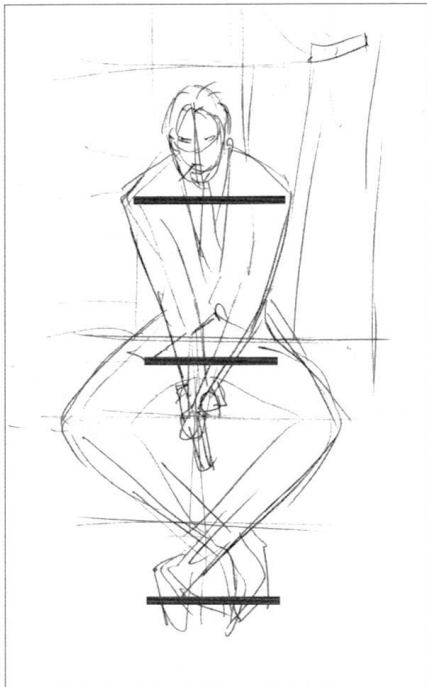
④ Dress the character in close and add details to the chaise lounge.



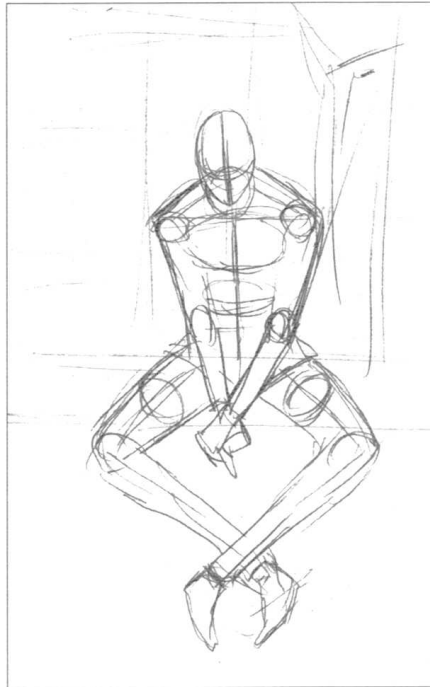
⑤ Final Composition

Propped against a Window Sill

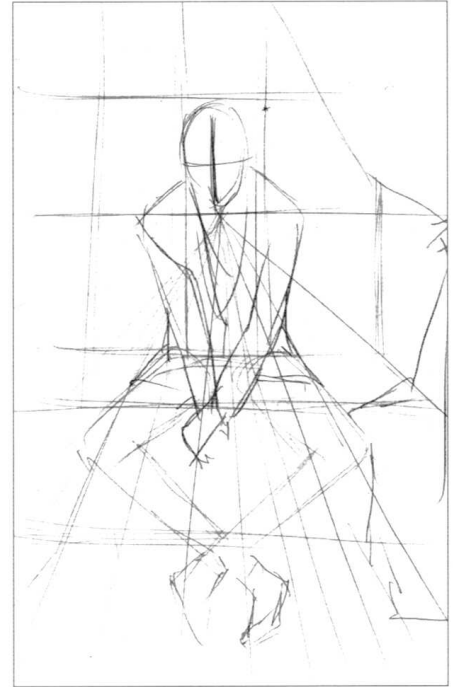
One-Point Perspective



① Create a rough sketch.

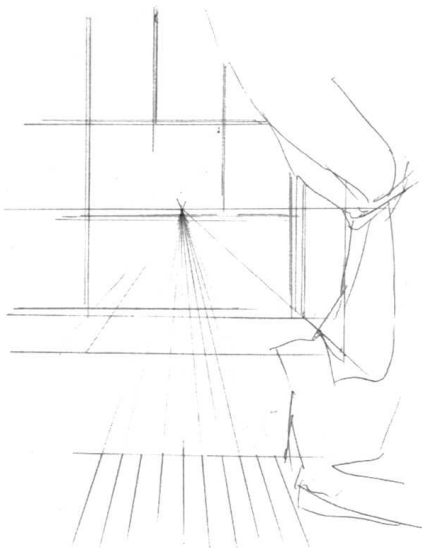


② Sketch the character as a simple solid object, maintaining awareness of the surface on which he is sitting.

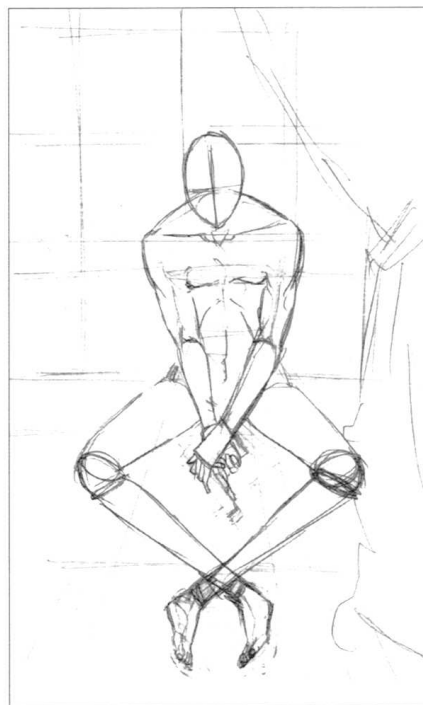


③ Sketch the background.

Background Sketch



Draw the background in one-point perspective to match the rough sketch. Draw the floor using evenly spaced lines, taking care to ensure that they converge toward the vanishing point.

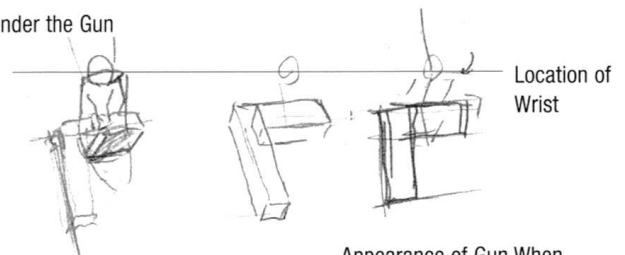


④ Draw the figure as a nude.



⑤ Dress the figure in clothes and add details to the background setting.

Using Boxes to Render the Gun



Appearance of Gun When Wrist Is Turned



Seated in a Chair One-Point Perspective



① Produce a rough sketch.



② Sketch the character as a simple solid object, maintaining awareness of the surface on which he is sitting. Pay careful attention to his posture and the angle at which the chair's back leans.

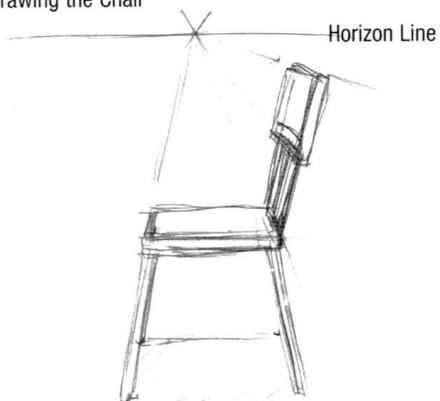


③ Draw the figure as a nude.



④ Dress the figure in clothes and add details to the background to finish.

Drawing the Chair



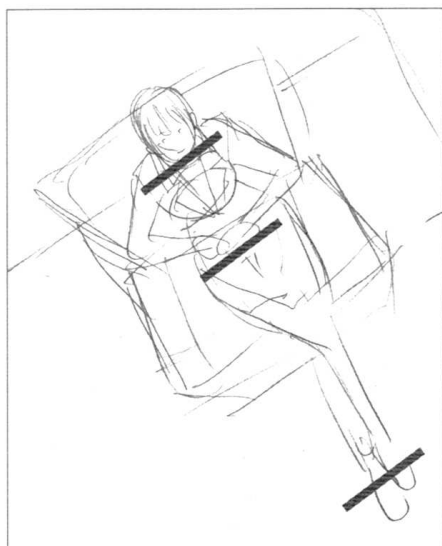
From this angle of perspective, the chair is located in "the world below."



⑤ Final Composition

Seated on a Comfortable Chair

Three-Point Perspective



① Produce a rough sketch.

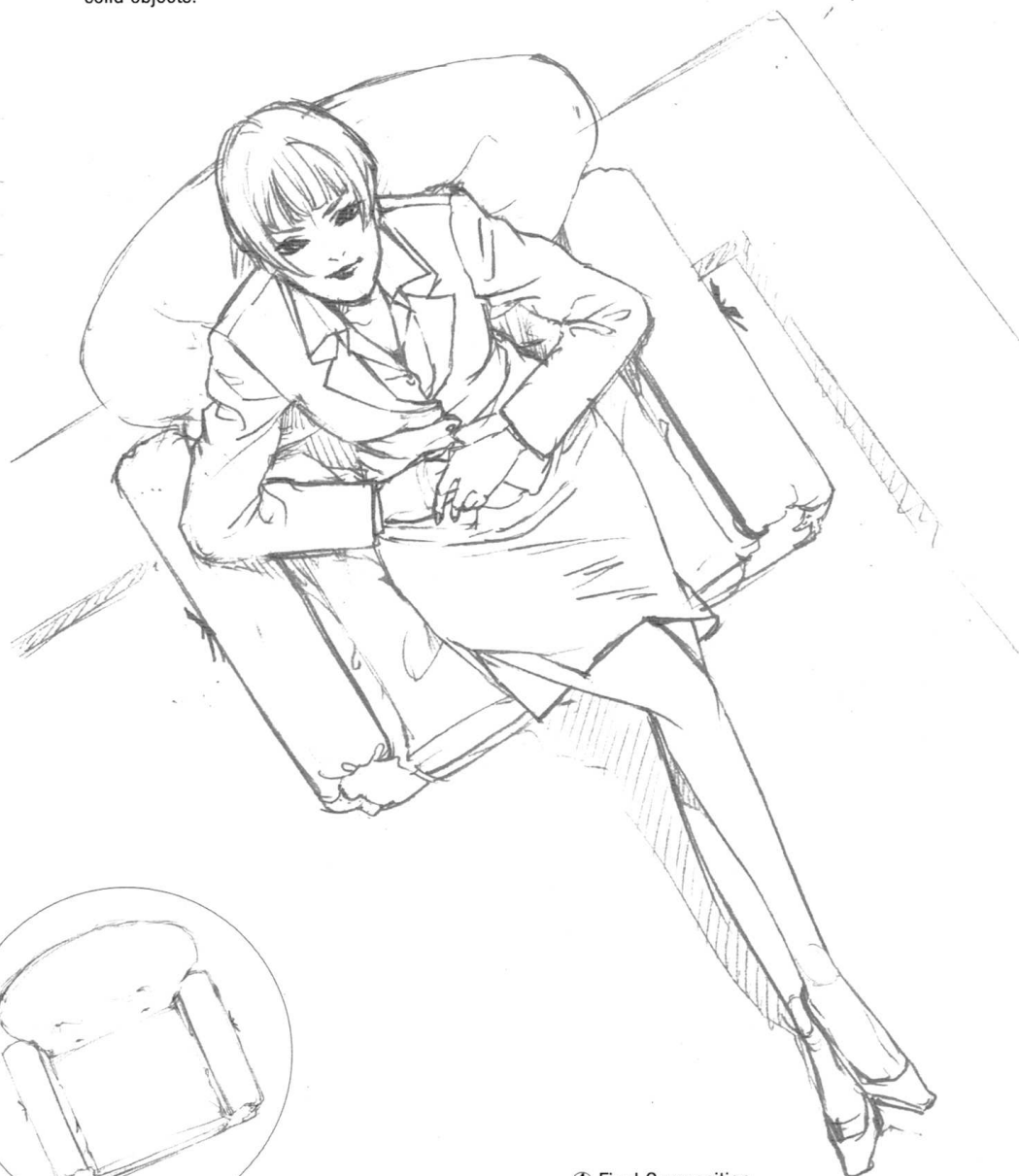
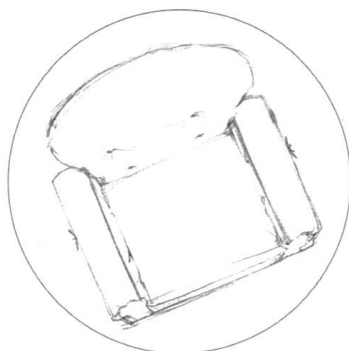
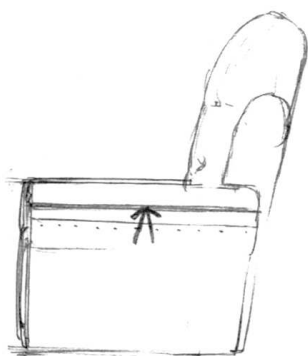
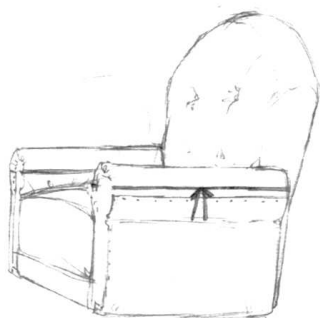
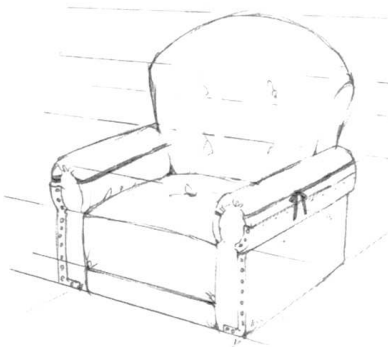


② Render the figure and the chair as simple solid objects.



③ Draw the figure as a nude.

Chair Study Sketch



④ Final Composition

Seated on the Floor

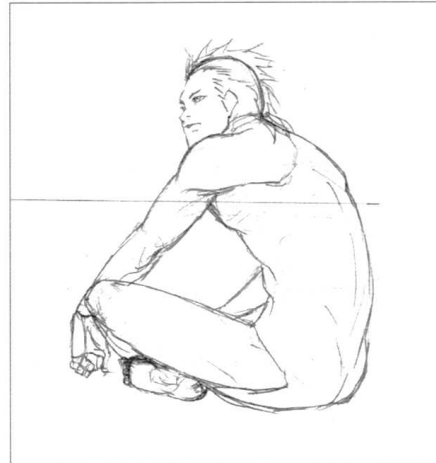
Two-Point Perspective



① Produce a rough sketch.



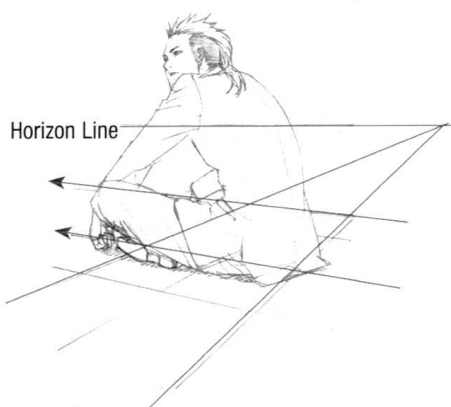
② Draw the character as a simple solid object, maintaining awareness of the surface on which he is sitting.



③ Sketch the figure as a nude.



④ Dress the figure in clothes and add details to the background to finish.

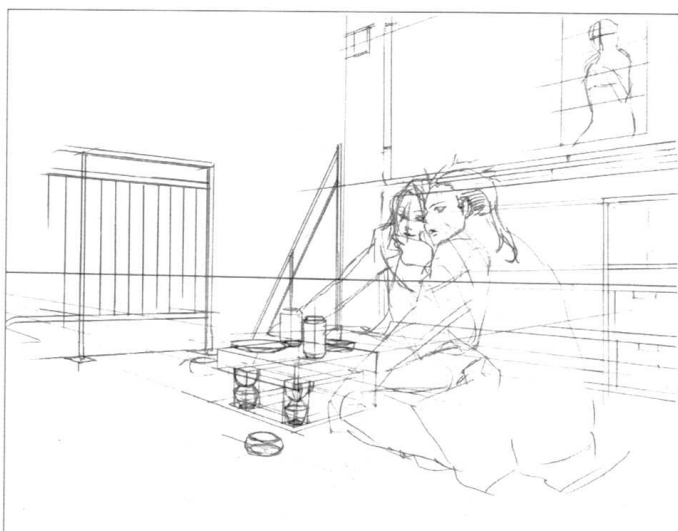


⑤ Final Composition

Adding More Characters and Drawing the Setting



① Add a rough sketch of a second character and the setting.



② Draw the character's face, the background, and the props in detail.



③ Final Composition

Drawing While Using Photos as Reference

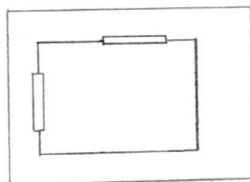
It is near impossible to draw a setting or landscape without using visual reference. Artists often take photos of what they intend to draw and use that as reference when sketching.

1. Tracing Photos

This technique consists of tracing a photo. Use a photocopier to enlarge the photo before working. Work over a light table and/or use tracing paper.



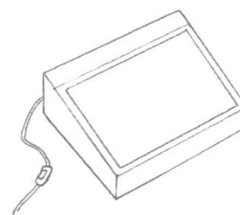
Target Photo



Using masking tape, affix the photo to the flip side of a sheet of drawing paper or photocopy paper.

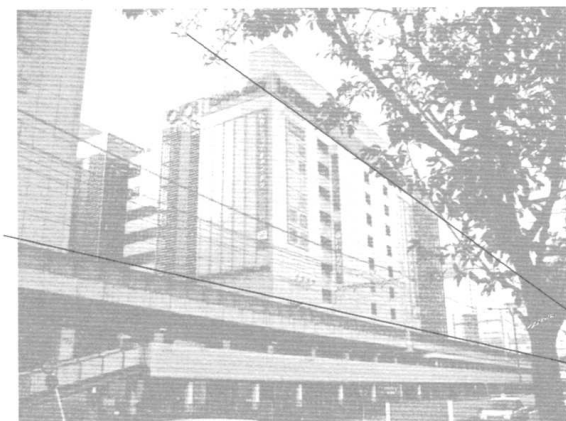


Front Side: Sketch the composition onto paper that is larger than the original photo.



The light table is a drawing tool used for tracing over photos and rough sketches.

Locating the Vanishing Point and Horizon Line



Extend the depth lines, which form the composition's primary lines.

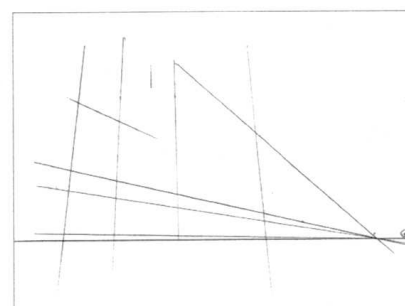
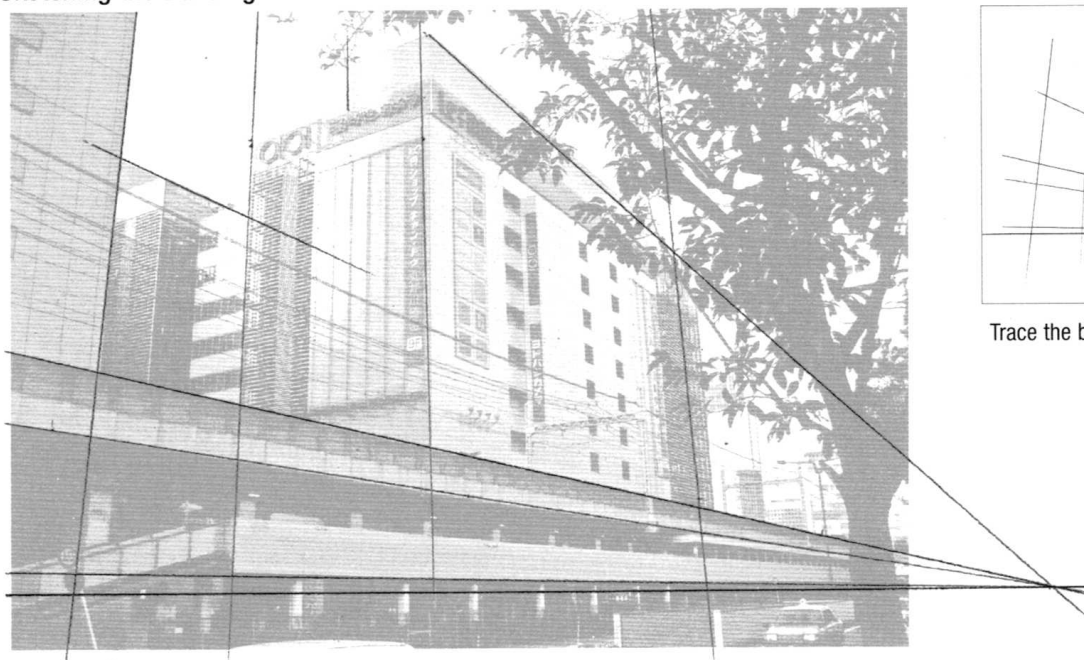


Position the vanishing point where the lines intersect.

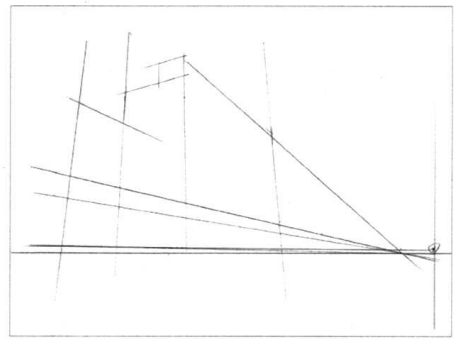
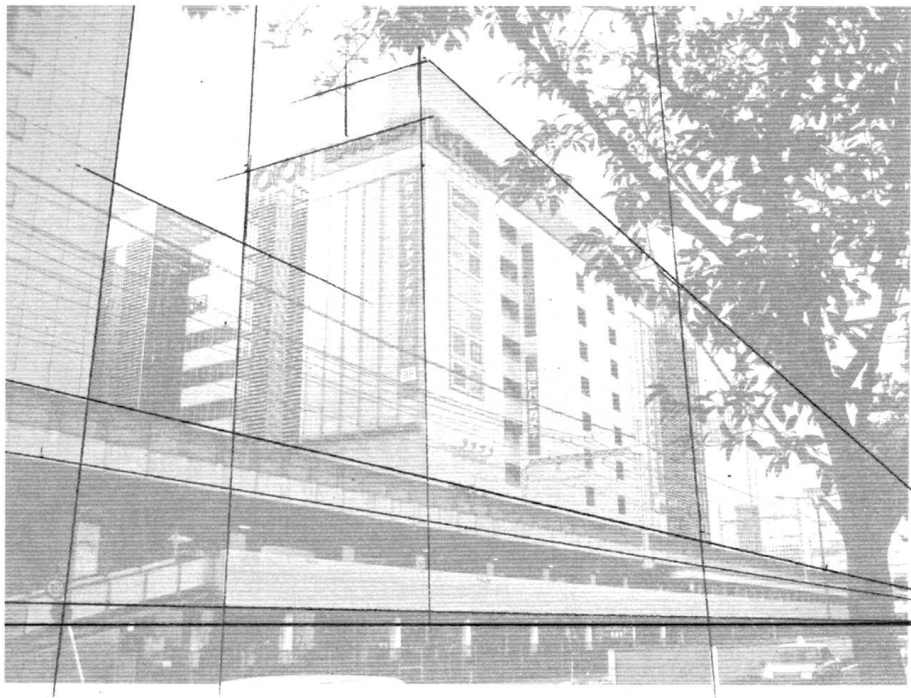
Draw a horizontal line through the vanishing point to create the horizon line.



Sketching the Buildings' Contours

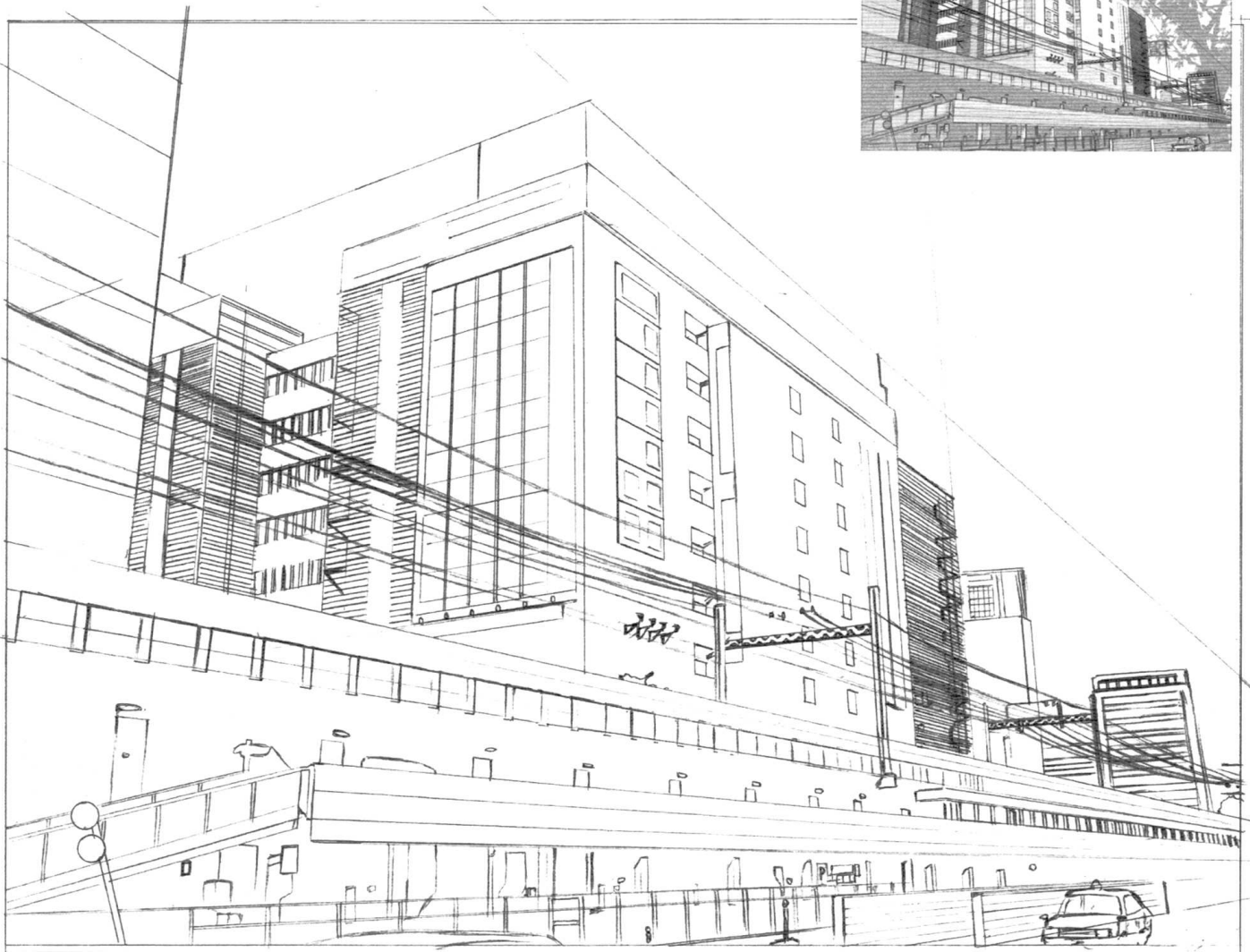


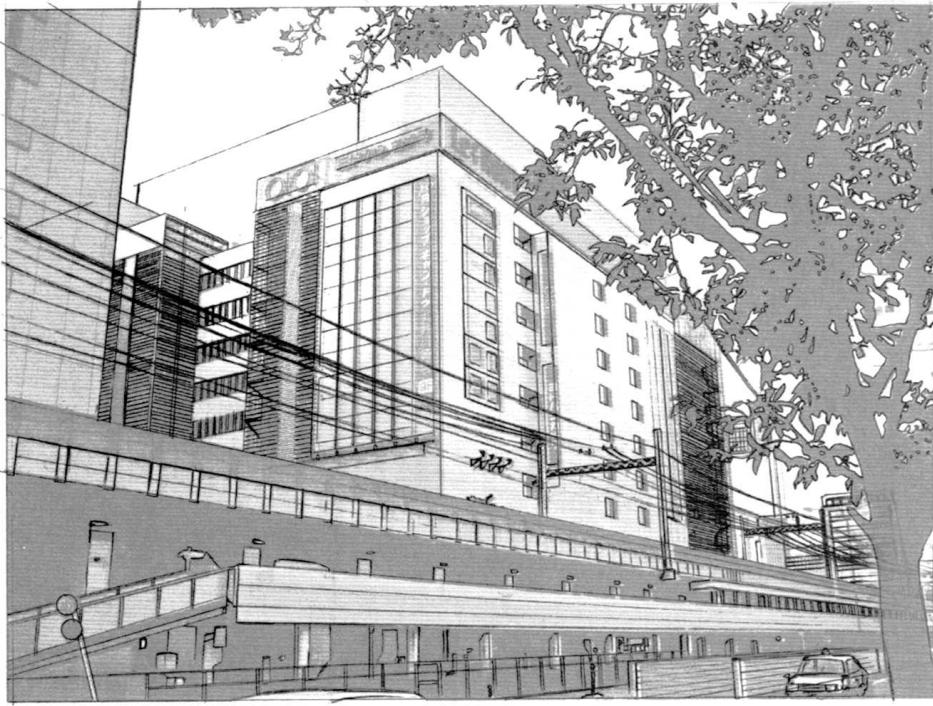
Trace the buildings' depth and height lines.



Fill in the drawing after first sketching the buildings as simple boxes. Never start by drawing the details. Always sketch the overall scene first.

Below is the completed treeless version.





When tracing a photo, trace only those elements that you need rather than the photo's entire contents. For example, decide whether you intend to include the tree or not or whether you only want only the tree and nothing else.



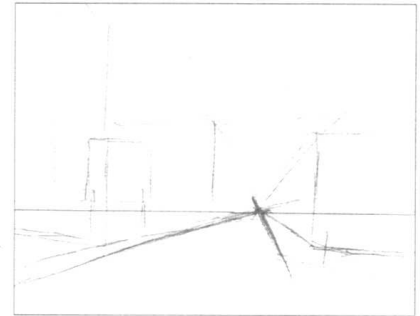
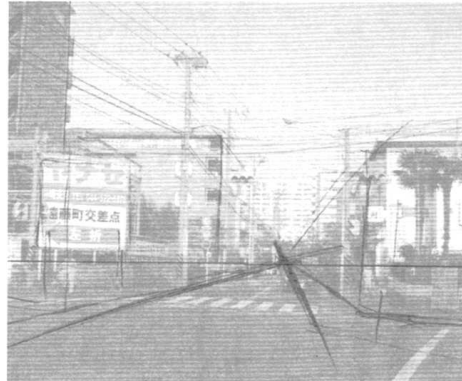
2. Making Corrections While Drawing

Subtle distortions in camera lenses can show up quite noticeably in photos. This page covers how to establish the perspective and adjust such distorted lines as you trace a photo.



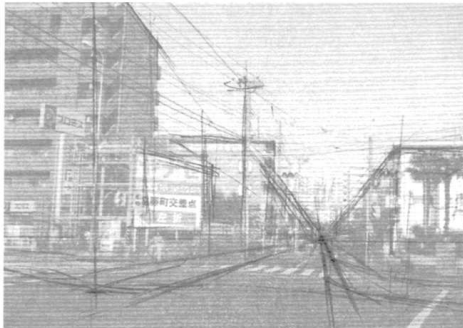
Target Photo

Locating the Vanishing Point and Horizon Line

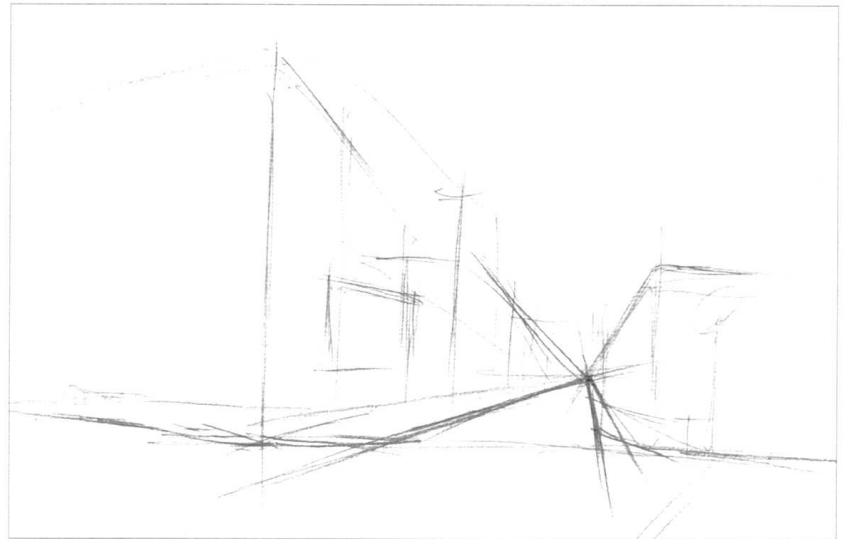


Use the street's depth lines to establish where to position the vanishing point and horizon line.

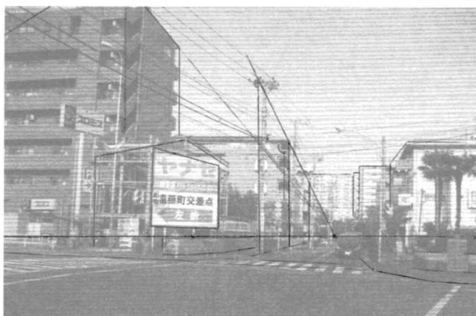
Sketching the Buildings' Contours



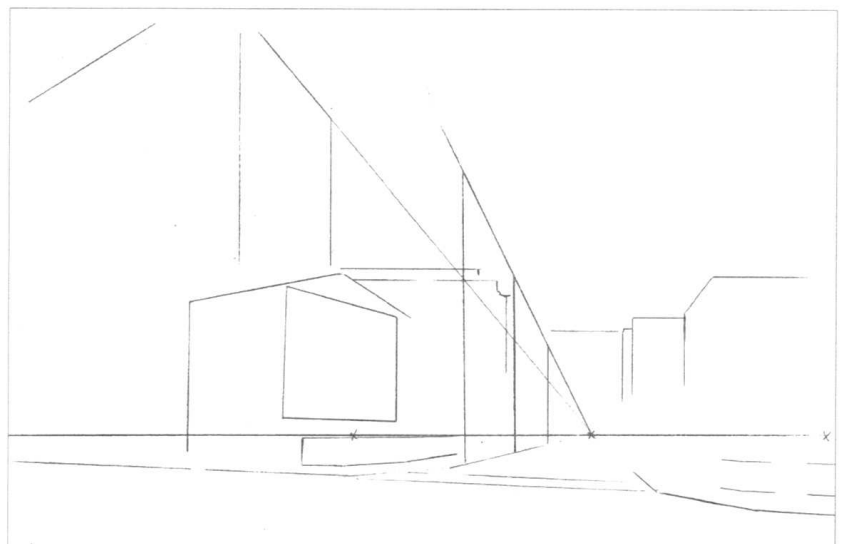
You have already established where to position the vanishing point and horizon line, so sketch the buildings in general terms, adhering to the perspective and make any necessary corrections.



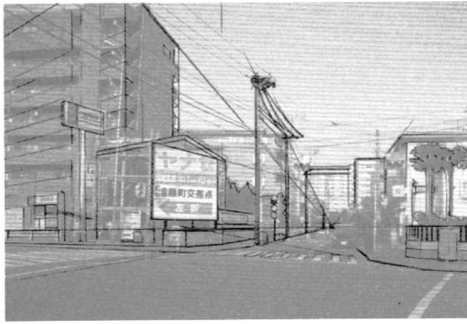
Starting with a General Form and Adding Details



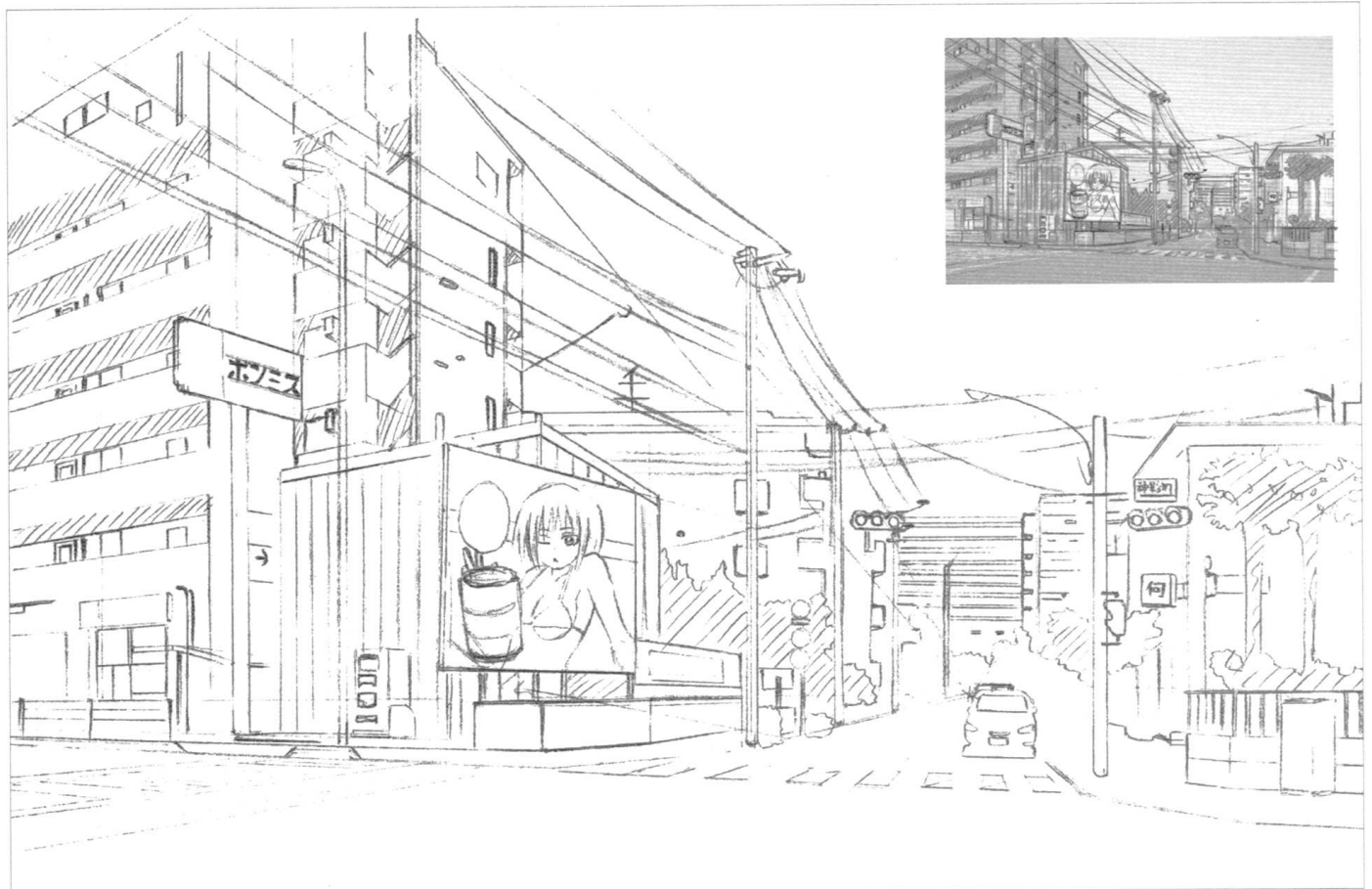
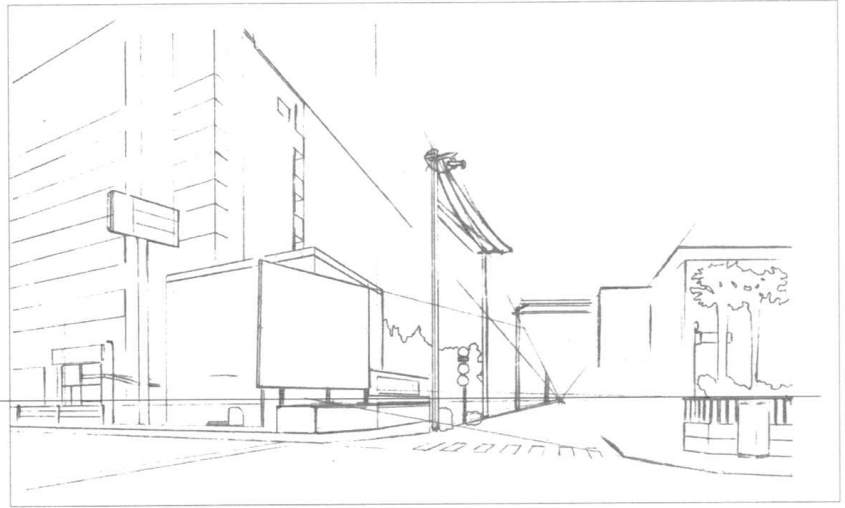
Draw in perspective signs near the picture plane, large buildings, and other items large enough to stand out. You may need to alter some of the vertical lines and depth lines significantly from their original forms. However, this is what this tracing/correction process is for.



Clearly Delineating the Outlines of Main Structures

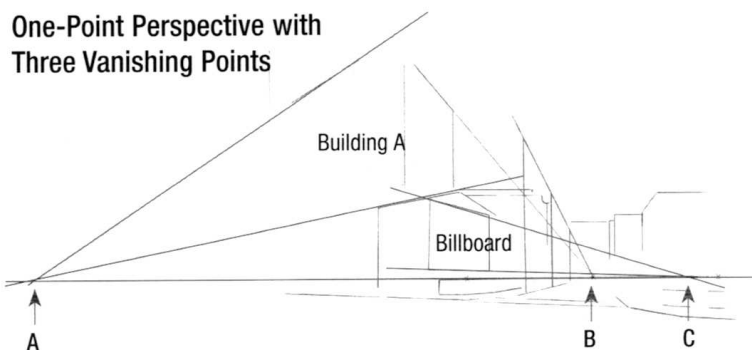


Obtain accurate outlines of the street and large objects before adding the details. Right-handed readers should draw from the left side of the composition and work toward the right.

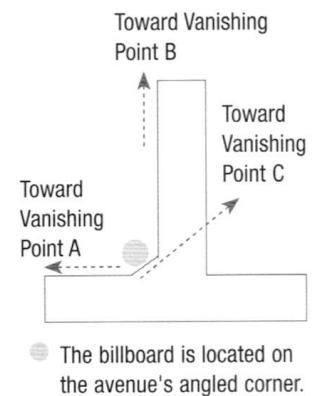


Final Composition: The billboard stood out, so the artist turned it into an ad for suntan lotion.

One-Point Perspective with Three Vanishing Points



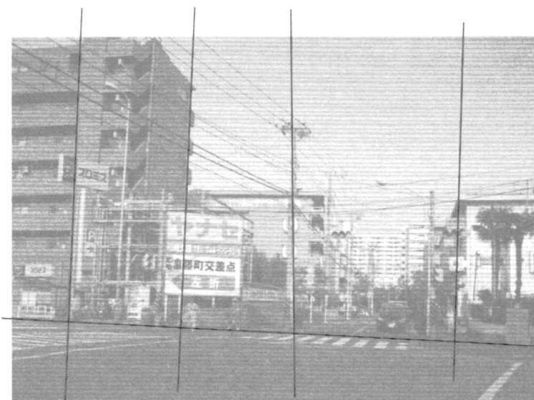
- **Vanishing Point A:** Here, the artist used this vanishing point solely for the left side of Building A, which is the only building the artist drew in two-point perspective.
- **Vanishing Point B:** The artist used this vanishing point to draw the main avenue and the buildings facing the avenue.
- **Vanishing Point C:** This is the billboard's vanishing point.



How the Drawing Would Appear If the Photo Were Traced without Alteration



The above shows the photo traced without alteration. The buildings lean in various directions, and the overall composition is distorted.

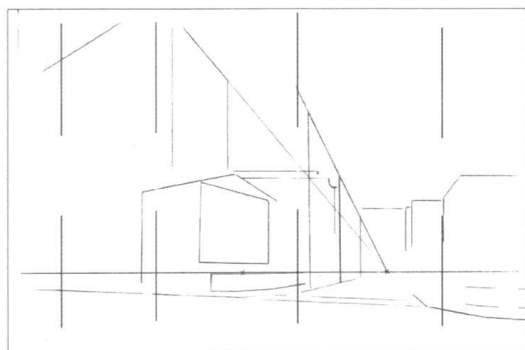


A subtle slope is present in the avenue. Furthermore, all of the height lines are tilted, and no perfectly vertical line is present in the photo.



The above shows a carefully traced faithful version of the photo. Something about it does not feel right.

Solution: Drawing Vertical Lines



Draw vertical lines on the drawing paper.

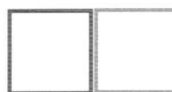
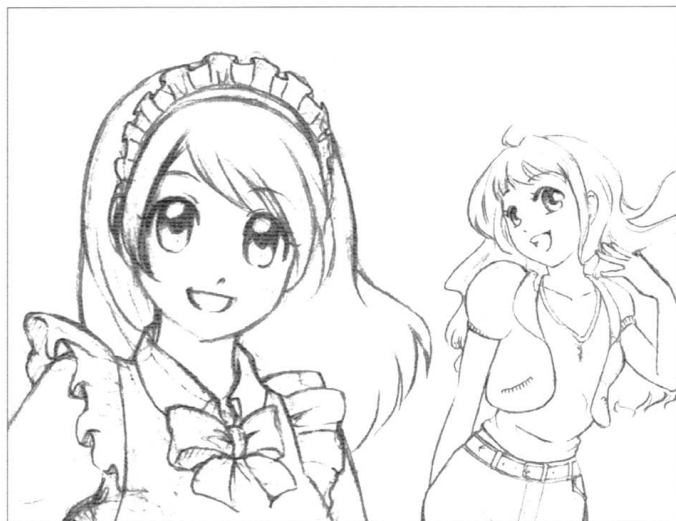
Sketching in perspective is not the same as drafting. However, you should still make an effort to draw truly vertical lines as much as possible, except when you are trying to create the illusion of depth in a vertical direction.



Methods for Creating the Illusion of Depth without Using One-Point, Two-Point, or Three-Point Perspective Techniques

This method consists of using lines or simply positioning objects to create a sense of depth.

Using Heavy and Thin Lines: Modulating Line Thickness to Create Depth



This is a technique used in *manga*.



The artist uses heavy lines for foreground characters and thin lines for background characters.



The *manga* technique of using thin lines to draw settings behind the characters likewise is an example of the "modulated line technique."

Using Standard-Weight Lines and Faded Lines: Fading to Create Depth



This is another technique used in *manga*.



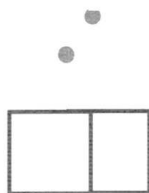
Background characters are made to appear faded.



Positioning: Overlapping to Create Depth



This is yet another technique used in *manga*.



Thick lines are used for the foreground character, while thin lines are used for the background character.

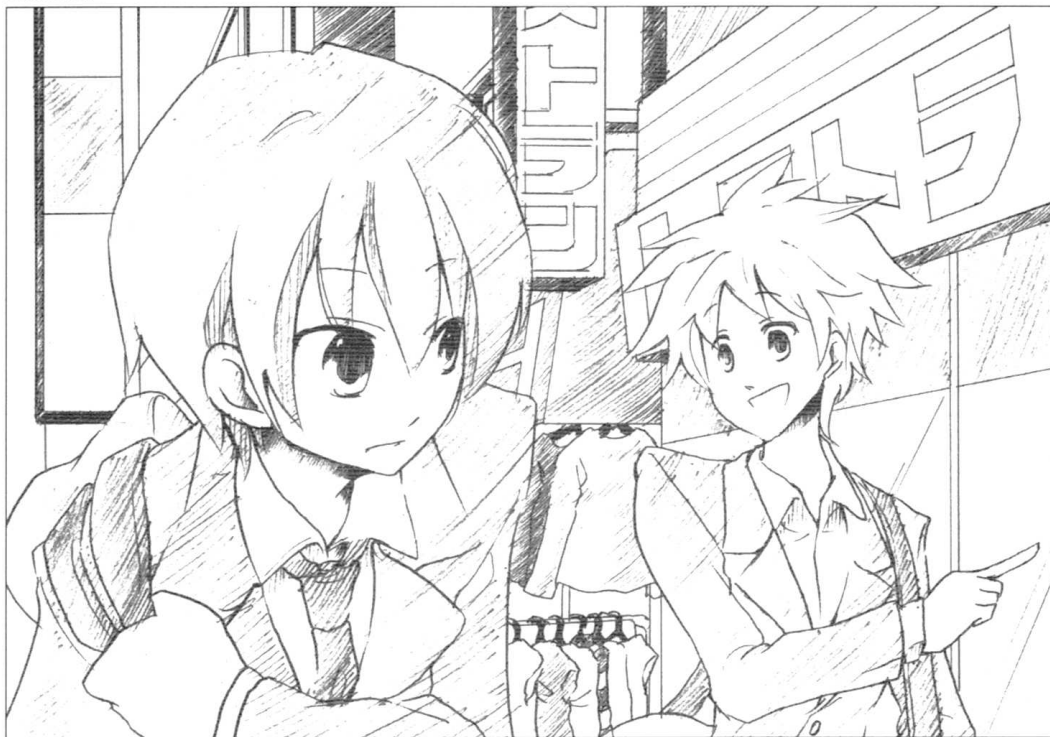
In *manga*, lines might be omitted or faded, or tone might be added to create a "faded" or "blurred" effect when rendering objects or characters in the background. This is a "fading technique."



The above example is drawn without employing techniques to create a sense of depth.

Incorrect

No Distinction Made between the Characters and the Background



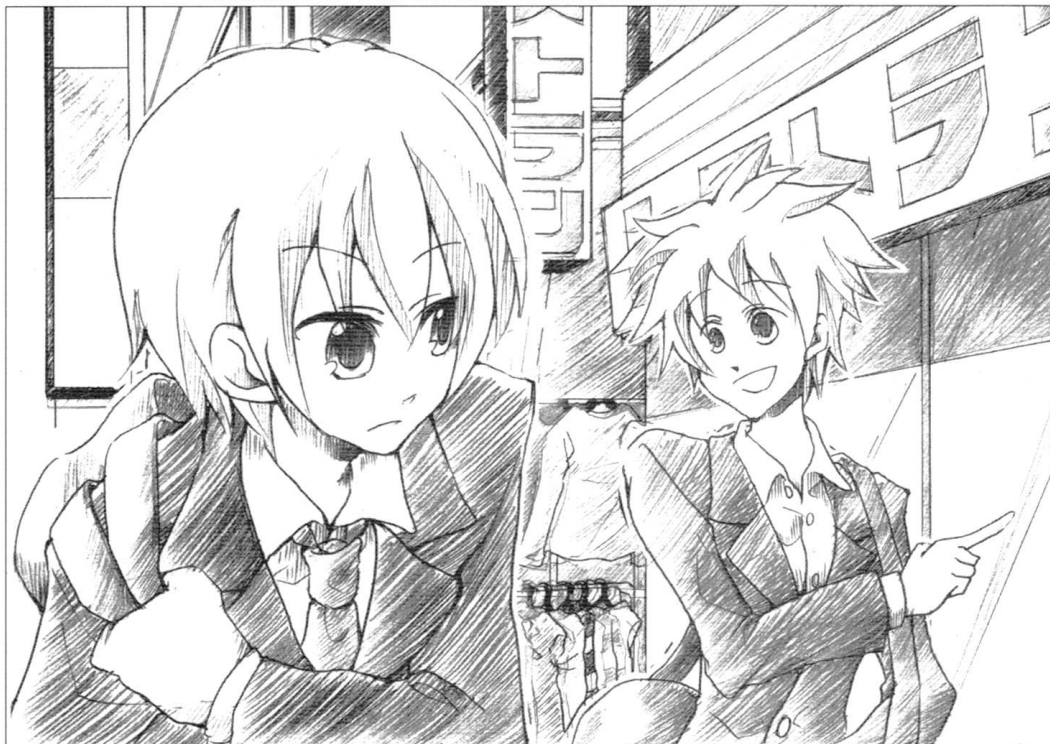
In this panel, the artist used the same line weight for the background and the characters. Despite all you have learned from this book, if you are creating *manga* and you fail to make your characters stand out, then all your efforts are in vain.

The background's lines touch the characters, making them appear "buried" in the background.



Correct

Redrawn So That the Characters Stand Out



Now, not only is the panel carefully drawn, but the characters also stand out visually.

You need to take a few measures to ensure your characters stand out.

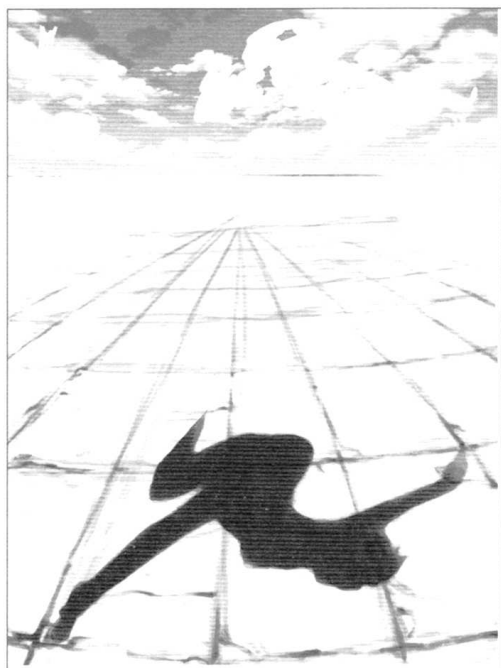


- Use heavy lines to draw the characters.
- Prevent the background's lines from actually touching the characters.
- If a character becomes "buried" in the background, use correction fluid or the like to trace the character's contours lines and remove any background lines touching the character.

Appealing settings are appealing, because the artist made the characters come to life.



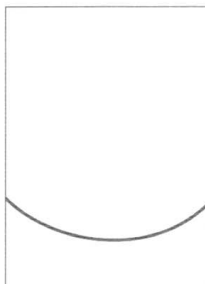
Beyond Perspective



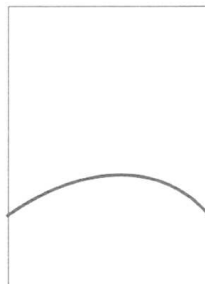
It is vital that you make good use of your imagination to come up with interesting compositions. Every now and then, instead of using a standard, flat horizon line, go ahead and bend it.

● Lens Effects

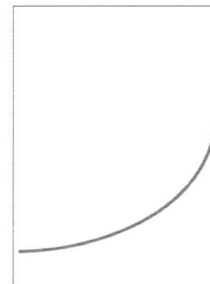
Try imitating the effects of various lenses when composing a drawing.



Concave Lens



Convex Lens



Aspheric Lens

Creating Different Impressions by Adding a Single Line



The above shows the composition without an additional line. The viewer has the impression that the shadow is cast on the ground; however, the scene has no sense of space.



The added line creates the impression of a sharply curved, convex surface, as if the girl were running on a gigantic ball.



The wavy line causes the viewer to imagine that the girl is running freely across barren ground.



The added line creates the impression of a concave surface, making the viewer imagine a vanishing point located below and evoking a sense of speed.

The "wide-angle lens" effect is the most well-known. However, you can achieve unexpected and impressive compositions by mimicking other lens effects as well.



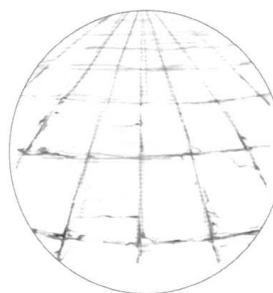
Cover Illustration and Subject



Character



The above shows the character's shadow, the buildings' shadows, and the buildings' silhouettes.



The ground appears warped.



The subject matter consists of how to present the character so she will have an impact on the viewer, while also having the viewer sense the horizon line, space, expansiveness, and depth using nothing more than the stone-paved ground, the sky, and light.

This shows the cover illustration. I added the subject matter of "solid objects" and "breaking through the boundaries of perspective" to the original subjects of "space, expansiveness, and depth."



17 Different Artists, 17 Different Styles

These next pages present the work of students from the *Manga* and Animation Department of Nippon Engineering College, who assisted in the production of this book.



Naomi Toya

Drawing Lines That Evoke a Sense of Volume

If you constantly maintain awareness of what it is you are trying to draw—whether it be a character's skin, muscles, clothing, etc.—then you will be able to develop your ability to create characters who have a strong presence.



Kou Kizaki

Using Simple Lines to Generate a Sense of Volume

While hair and the flesh are both soft, they are soft in different ways. If you become meticulous about conveying this difference, then the lines you use will become more sophisticated, and you will achieve characters that are full of life.



Karasu Tsukishiro

Devising Compositions That Dramatize the Characters

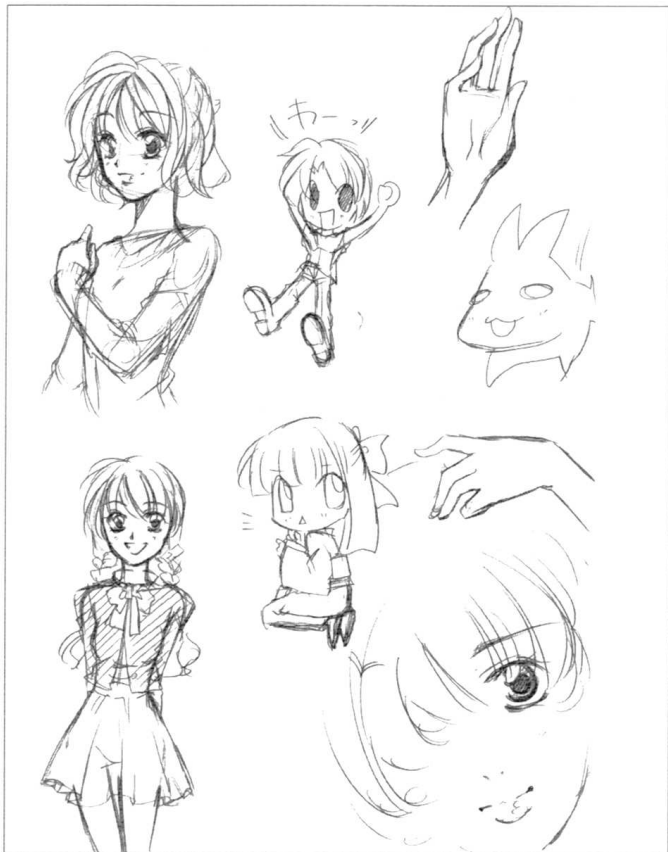
The artist needs to have a sense of responsibility toward "presenting something to the viewer" and an earnest awareness toward "communicating through pictures." These help the artist create compositions that make the viewer conscious of the character design.



Kanata

Stylized Characters Are Also Capable of Expressing Space and Three-Dimensionality

Sketching with awareness of space (depth) and volume reflects not only in the composition but also in clothing textures and even in the stylized characters, themselves.



Yu Shinozaki

Using Study Sketches to Cultivate Character Variation

If you make an effort to draw study sketches on a regular basis, then you will be able to develop a variety of hatching and character representation techniques.



Natsume Hikaruga

Placing Importance on Portraying Volume Leads to Characters with Presence

If an artist is meticulous about each stroke, using heavy lines for the exterior contours, thin lines for shadows, and maintaining awareness of the significance behind the curves lines defining the hair, then even the character's hair will convey a sense of texture.



Kyoya Uzuki

The Pursuit of Fine Lines Leads to a Host of Textures

The fine lines used in the character's hair contrast with the stiff coat. The artist's quest when drawing hair reveals to the artist how to portray differences in texture.



Izumi Yukino

Having a Character Look at the Viewer Is a Sure-Fire Way of Creating an Impression

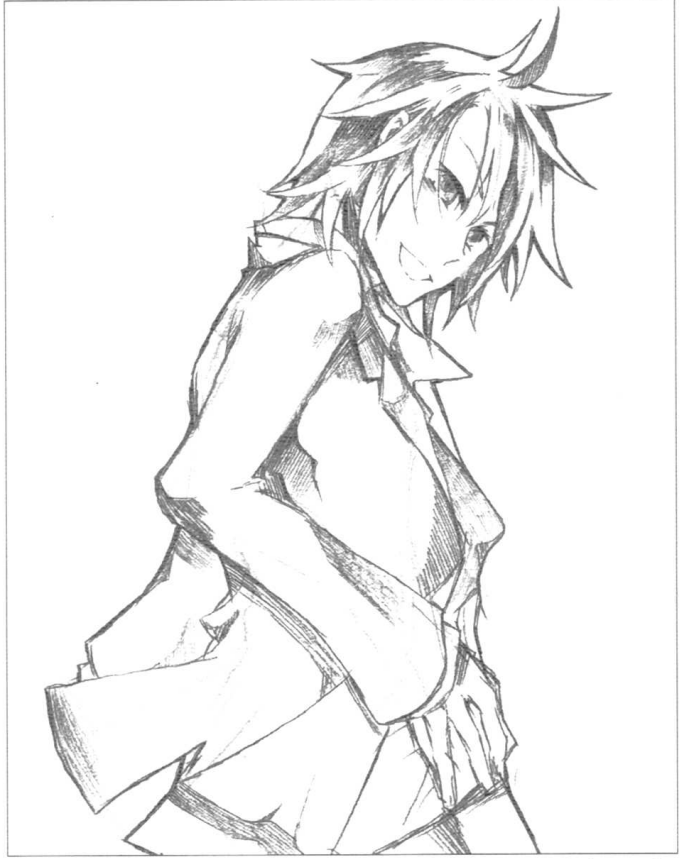
The character's eyes are the windows to her soul, and her gaze (i.e. where she is looking) plays a major role in portraying the character. Compositions that display awareness of this fact engage the viewer.



Rima Ayatsuki

A Modicum of Effort toward Achieving Three-Dimensionality Leads to Characters with Balance

Sketching while maintaining awareness of the thickness and construction of clothing as well as placing importance on giving the character a sense of volume using hatching and shadows imbues the character with a definite presence.



Yagi Sogawa

Vigor in Strokes, Texture, and Fastidiousness toward Shading Makes a Character's Individuality Shine

When using hatching to portray shadows and textures, the artist can either opt for the tried-and-true techniques or let his or her own sensibilities lead. Placing importance on your own sensibilities allows you to create original characters and compositions.



Yuki Noguchi

Maintaining a Strong Concern towards Silhouettes and Details Leads to Compositions with Impact

Modulating your use of contrasting strokes (i.e. whether to add detailed, fine lines or not) constitutes a powerful weapon in creating unique compositions.



Shu

Achieving a Sense of Volume through Portraying Muscles as Three-Dimensional "Lumps"

A sense of strength emerges from the wings, which contain lines that heighten the muscles' sense of volume and display an exaggerated thickness.

Sakaki

Animated Lines Are the Character's Wellspring of Appeal

An artist can count the ability to produce animated lines as an asset. Once an artist becomes accustomed to drawing, he or she tends to forget to have fun when sketching. However, if you remember to have fun, then you should find yourself able to generate lively strokes.



Miharu Kawara

There Is Nothing More Powerful Than a Charming Smile

A happy smile alone is able to gain significant favor amongst the viewers. Characters who have smiles that make the viewer imagine the artist smiling constitutes an important, precious commodity in creating artwork.



Niwatori

Artwork That Displays Awareness of Composition and Movement Yields Memorable Characters

The impact of a key panel or scene is generated from an artist's constant concern towards composition. On top of that, a composition with movement has the ability to transfix a reader.



Junko Takahashi

Being Fastidious When Sketching Creates Appealing and Individualistic Compositions

Placing importance on details such as hairstyles or lace imbues your artwork with appeal. Showing consideration toward using strokes that evoke a sense of texture will become a natural part of your ability and translate into your capacity to communicate to the viewer.



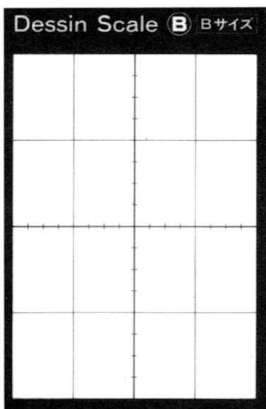
Tomohiro Ushio

Artwork That Reflects Unique Ideas Speaks to the Artist's Personal Interests and Artistic Experience

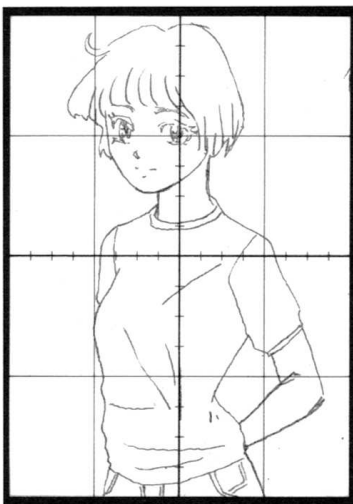
The above composition could never be created without the artist being interested in cute things and experience in drawing them. Drawing subjects that you find interesting will ultimately become a valuable artistic tool.

Caution!

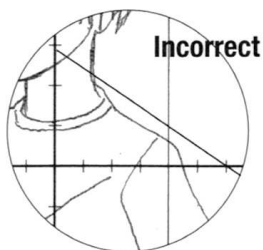
Being Concerned Only with Form Can Sacrifice Three-Dimensionality



The above shows grid paper, which is drawing paper that has vertical and horizontal lines. The grid makes it easy to trim panels and compositions and to capture desired forms.



I often recommend grid paper, because it helps when drawing diagonal lines from a primarily vertical or horizontal direction.



However, if you rely on grid paper to practice drawing, then you might become focused solely on the angle of the lines and forget that diagonal lines signify depth. As a result, you will find yourself only able to produce flat compositions.



Maintaining awareness of a two-dimensional vertical and horizontal plane while capturing a three-dimensional space will help you develop your ability to display a consciousness of volume when you sketch.

"I have trouble drawing backgrounds." "Settings are a pain." "I don't know how to draw settings." "I can't draw backgrounds properly."

These are all standard comments I hear when *manga* artists get together.

When we hear the words, "setting" or "background," we automatically get the urge to circumvent them. However, adding even a modest suggestion of a setting remarkably elevates the composition's sense of presence and makes it surprisingly convincing.

Yet, what can an artist do to become able to draw something akin to a setting successfully? The first step is to change conventional thinking and conceive of the character and the setting as a single entity. The character and the setting are inseparable. When drawing a character, he or she is always positioned within a "location." This "location" has air. It is a space. It has a sky. It has a ground.

We, humans devised the rules of perspective as a means to allow us to portray a three-dimensional world using a two-dimensional medium. The rules of perspective first appeared in the field of Painting Now, they primarily pertain to the fields of Architecture and Drafting. If we follow the rules of perspective as used in Architecture and Drafting, then it is almost as if "vertical" and "horizontal" would be absolute terms, because we would have to draw as accurately as possible. And, in fact, there are people who know how to follow these exacting rules.

However, needless to say, *manga* and book and magazine illustration are not drafting. Without doubt, a certain degree of accuracy is needed when drawing parallel lines and "straight" vertical lines. But, perhaps the vanishing point might be slightly off, the horizon might be curved, or "vertical" lines might lie at a slight tilt. This is how we work in our field.

Techniques for drawing perspective commonly used in *manga*, illustration, and anime are actually techniques of *manga* sketching and perspective that developed as artists used knowledge from drafting (specifically the rules of perspective) while seeking means of having characters they designed themselves inhabit and engage in action within a composition and conveying this information to a reader.

This publication is a compilation attempting to answer as much as possible the question, "How do I draw this?" After reading this book, you may find yourself becoming aware of floor and wall lines you never noticed previously, and the space portrayed in your compositions will begin to expand.

It is my sincerest hope that the reader finds this book even slightly helpful toward creating compositions that appeal to a larger audience.

Hikaru Hayashi, Go office